Universiteit Utrecht

Faculty of Social Sciences

Master of Work- & Organizational psychology

Work engagement among trainees

The relations between person-environment fit, psychological meaningfulness, -availability, -safety and work engagement.

THESIS

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Word count: 9499 (without attachments)

July 2015

Abstract

To gain more insight into the psychological mechanisms that underlie work engagement of trainees, this study investigated the role of person-environment fit, psychological meaningfulness, –safety , and –availability. These were include as mediators in the Job Demands-Resources model. Questionnaire data were collected among 104 management trainees (22-34 years, M = 27.8) of a Dutch bank. As hypothesized, person-environment fit partially mediated the relationship between job resources and engagement, but unexpectedly not the relationship between personal resources and engagement. Psychological meaningfulness and –availability also partially mediated the relationship between job resources and engagement, while psychological safety did not. Additionally, person-environment fit, psychological meaning and –availability together fully mediated the relationship between job resources and engagement. Moreover, we found an underlying factor representing these three scales which showed the same mediation effect. These results suggest that job resources may alter trainees' perception of fit with the work environment, represented by person-environment fit, psychological meaningfulness and –availability, which in turn fosters work engagement. More specifically, especially job resources that foster learning and development (i.e., task variety, feedback, social support and learning opportunities) are important for trainees in this process, whereas other job resources (i.e., job control) seem to be less important**.**

Introduction

Talent management is becoming a top priority for organizations across the world. Trends for talent management, talent wars, talent metrics retention and concerns for talent strategy are expressed in the literature across various countries like the USA, the UK, Australia, Japan, China, and India. Talent has become the key differentiator for human capital management and for leveraging competitive advantage (Bhatnagar, 2007). Grounded within strategic HRM (Becker, Huselid & Ulrich, 2001), the management of talent seems to be one of the key functions that HRM is playing strategically in organizations nowadays (Bhatnagar, 2004). Research shows that a war for talent is happening due to labor market shortage (Brewster, Sparrow & Harris, 2005), yet very little scholarly attention has been aimed at competitive talent management strategies of firms in this talent battle (Bhatnagar, 2008).

According to Bhatnagar, 'pivotal talent pools', pools of high potential and high performing employees that the organization can draw upon to fill pivotal talent positions (Collings & Mellahi, 2009) make the biggest difference to organizational success. Employees who are selected for these pools receive additional development opportunities such as training, education, coaching and better career opportunities. These talent pools are vital targets for HR investment and leader attention (Boudreau & Ramstad, 2005) and provide a fierce employer brand equity (Fitz-enz, 2003) in a global market where talented employees are scarce. According to Parry and Proctor-Thomson (2003), it is very important for organizations to take an active role in identifying and developing their own employees who have the potential to become effective leaders. Indeed, a global talent management study confirmed that high performing organizations follow a talent pool strategy – recruiting the best people and then finding positions for them (Stahl, Bjorkman, Farndale, Morris, Stiles & Trevor, 2007).

In Europe, many organizations have designed a specific form of pivotal talent pools, called 'traineeship programs'. These programs are competitive talent management tools aimed at attracting, maintaining and developing talent. A traineeship is normally a one to four year program for freshly graduated university students. During the intensive program talented graduates work at several projects in the organization and receive a lot of extra training, education, mentoring, and coaching (Sardes, 2010). They learn about the various departments of the company, its clients, its products and services, and additionally receive (management) training as after the traineeship most trainees become a manager. The goal of most traineeships is to attract the most talented graduates and to develop them as fast as possible, with the long term vision that they will be the future leaders of the company. To be able to

enroll in a traineeship applicants have to go through a rigorous selection procedure with very high drop out rates. For example, at a Dutch bank normally 1 out of 50 applicants gets hired as a trainee (Sardes, 2010).

Effective talent management policies and practices demonstrate commitment to human capital, resulting in more engaged employees and lower turnover. Consequently, employee engagement has a substantial impact on employee development, productivity and talent retention (Bhatnagar, 2007). Therefore, it is very important to engage trainees. Employee engagement, in fact, can make or break talent management policies (Lockwood, 2006). In order to obtain high performance in postindustrial, intangible work that demands innovation, flexibility, and speed, employers need to engage their employees (Martel, 2003). In the past couple of years, work engagement has been receiving increasing attention as a key determinant of performance (Macey, Schneider, Barabera & Young, 2009). It has been suggested that designing the performance management process to stimulate work engagement will lead to higher levels of performance (Mone & London, 2010), possibly beyond what is achievable through a conventional focus on performance itself (Gruman & Saks, 2011). Bakker, Demerouti and Brummelhuis (2012) found that work engagement is not only a necessary condition for enhanced performance but also for active learning, making it even more important for trainees. Additionally, talented employees can be retained by providing them an engrossing environment which peaks their performance and giving them a continuous work experience which is difficult for competitors to replicate (Bhatnagar, 2008). Research shows that companies with engaged employees have higher employee retention as a result of reduced turnover and intention to leave the company (Markos & Sridevi, 2010).

Thus, to get the highest return on investment from traineeships, organizations should know how to maximize trainee engagement to improve the active learning, performance and retention of their talented employees. Therefore, they should have insight in the engagement of their trainees and in its underlying mechanisms. At this moment there is a lack of research on this topic. That is why this paper aims to gain more insight in the underlying mechanisms of the work engagement of trainees.

Resources and engagement

The concept of work engagement refers to an affective-motivational state of work-related well-being that is characterized by vigor, dedication and absorption (Schaufeli, Salanova, González-Roma, & Bakker, 2002). Vigor is characterized by high energy levels, mental resilience during work, and the motivation to overcome obstacles. Dedication

expresses itself as commitment to the work and a feeling of significance, enthusiasm, inspiration and pride. Absorption is characterized by being happily engrossed in one's work, so that time passes quickly and it is difficult to detach from work.

A widely used model to investigate work engagement is the Job Demand-Resources model (Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Schaufeli & Bakker, 2004). The first basic assumption of the JD-R model is that job resources are positively related to work engagement, which, in turn, is related to positive outcomes, thus constituting a motivational process (Bakker & Demerouti, 2007). As such, job resources refer to those physical, psychological, social or organizational aspects of the job that may help to achieve work goals, reduce job demands and the related physiological and psychological costs, and stimulate personal growth and development (Demerouti et al., 2001). Job resources may relate to the job content (i.e., job control, task variety) or the job environment (i.e., feedback, social support, learning opportunities).

Second, a similar motivational potential to that of job resources is attributed to personal resources. They may be positively related to work engagement, and consequently to positive work-related outcomes (Xanthopoulou, Demerouti, Bakker & Schaufeli, 2007). By definition, personal resources are positive self-evaluations (i.e., self-efficacy, optimism, flexibility) that are linked to resilience, and refer to an individual's sense of ability to successfully control and impact his or her environment (Hobfoll, Johnson, Ennis, & Jackson, 2003).

When applying the JDR-model to trainees, they seem to have access to a high level of job resources during the traineeship program. Several elements of a traineeship provide trainees with additional job resources, for example: coaching and mentoring (i.e., feedback, social support, learning opportunities), working on several projects (i.e., job control, task variety) and training (i.e., learning opportunities). This assumption is partially supported by a study wherein highly educated young employees reported more job resources (autonomy and social support) than lower educated young employees (Akkermans, Brenninkmeijer, Schaufeli, Van den Bossche & Blonk, 2013). Therefore, five job resources are included in the current study: feedback, job control, task variety, social support, and learning opportunities.

Based on the rigorous selection procedure, which they passed, we can assume that trainees have a high level of personal resources as well. During their traineeship trainees are involved in several different short projects in many different contexts. They are exposed to various new situations and challenges, which they have to deal with. Important personal resources which could help them to deal with these challenges successfully are flexibility and

proactive coping (Searle & Lee, 2014). These personal resources enable trainees to quickly adapt to new situations, which appears to be very important during a traineeship. Additionally, due to the dynamic, multifaceted nature of modern jobs, personal resources such as adaptability and proactivity are more and more associated with work engagement (Gruman & Saks, 2011), suggesting that these resources will still be important when occupying a normal position after the traineeship. Thus, in the current study two personal resources are included: flexibility and proactive coping.

The mediating role of person-environment fit

Person–environment (P-E) fit is defined as the compatibility that occurs when individual and work environment characteristics are well matched (Kristof-Brown & Guay, 2011). According to Cable and Derue's (2002) three-factor model of fit, P-E fit can be broken down into three dimensions: two dimensions concerning person-job fit, and one dimension concerning person-organizational fit. Person-job fit (P-J fit) refers to the perceived relationship between employee characteristics and job characteristics (Kristof-Brown, Zimmerman & Johnson, 2005). A two-dimensional conceptualization of P-J fit consists of needs-supplies (N-S) fit and demands-abilities (D-A) fit (Edwards, 1991; Cable & Derue, 2002). N-S fit refers to the perceived congruence between employee needs, desires, and preferences on the one hand and the abilities of the job characteristics to satisfy these on the other hand; D-A fit refers to the perceived congruence between job demands and employee's knowledge, skills and abilities. Person-organization (P-O) fit is defined as the perceived compatibility between employees' personal values and an organization's culture (Cable and Derue, 2002).

Several theoretical frameworks link P-E fit with job and personal resources. For example, the Theory of Work Adjustment (Dawis & Lofquist, 1984; Lofquist & Dawis, 1969) argues that P-E fit reflects the degree to which (1) employees are able to satisfy their biological and psychological needs in the context of an organization (i.e., job resources) and (2) employees are able to fulfill organizational requirements on the basis of their abilities (i.e., personal resources). For example, by using personal resources like proactive coping trainees will be better able to influence work situations, resulting in a better P-E fit.

Secondly, Social Determination Theory (Deci & Ryan, 2000) tells us that humans inherently desire to function optimally by satisfying their three innate psychological needs: need for autonomy (i.e., need to exercise control over one's actions), need for relatedness (i.e., need to feel connected with others) and need for competence (i.e., need to have an effect

on one's outcomes and surroundings). Job resources like job control, social support, learning opportunities, task variety and feedback and personal resources like flexibility and proactive coping are likely to help employees to fulfill these psychological needs. As such, job and personal resources help employees to satisfy their needs, improving N-S fit, and to meet the demands of their job, improving D-S fit.

Cable and Derue (2002) found that P-O fit perceptions are related to perceived organizational support, referring to global beliefs about how much an organization values employees' contributions and cares about their well-being. We argue that job and personal resources will lead to a higher perceived organizational support, and therefore to a higher perceived P-O fit. To sum up, the literature suggests that job and personal resources are positively related to all dimensions of P-E fit.

P-E fit also seems to relate to work engagement. Prior studies have supported the positive effect of perceived P-J fit on job satisfaction, organizational commitment and work engagement, and its negative effect on turnover intention (Lauver & Kristof-Brown, 2001; Chen, Yen & Tsai, 2014). Poorer P-J fit is widely associated with lower job satisfaction and greater strain as well (Kristof-Braun et al., 2005). Therefore, P-J fit plays a critical role in employee effectiveness and retention. P-J fit also showed to mediate the relationship between empowering working conditions (i.e., job resources) and work engagement (Laschinger, Wong & Greco, 2006). P-O fit is also been suggested to correlate with work engagement. According to Bakker and Leiter (2010) work engagement thrives in settings that demonstrate strong connections between corporate and individual values. A greater perceived congruency between the individual and key aspects of his or her organizational environment results in higher levels of work engagement (Maslach & Leiter, 2008). Thus, the literature suggests that all dimensions of P-E fit are associated with work engagement. Therefore we argue that:

(H1) Person-environment fit mediates the relationship between job resources and work engagement.

(H2) Person-environment fit mediates the relationship between personal resources and work engagement.

The mediating role of psychological meaning, -safety and -availability

Kahn (1990) argued that three psychological conditions are necessary for an employee to bring themselves into their work role performance and to make them engaged: psychological meaningfulness, psychological safety, and psychological availability. According to Kahn

(1990) employees ask themselves three questions in every situation, whereby, depending on the answer, they feel engaged or disengaged. These questions were: (1) How meaningful is it for me to bring myself into this performance (psychological meaningfulness)? (2) How safe is it to do so (psychological safety)? and (3) How available am I to do so (psychological availability)? More specifically, Kahn (1990) defined these conditions as follows. Psychological meaningfulness refers to the sense of return of investments of self in role performances, for example by feeling worthwhile, useful and valuable – having made a difference and not have been taken for granted. Psychological safety is defined as a "sense of being able to show and employ self without fear of negative consequences to self-image, status or career" (Kahn, 1990; p. 708). Psychological availability refers to a "sense of possessing the physical, emotional and psychological resources necessary for investing self in role performance" (p. 714). Kahn's operationalization of employee engagement suggests that employee engagement is a multi-faceted construct (Bedarkar & Pandita, 2013), being remarkably similar to Schaufeli et al.'s (2002) operationalization of work engagement.

The main factors influencing of these three conditions for engagement proposed by Kahn (1990) are very similar to job resources. First, the level of meaningfulness depends on the task structure (i.e., job control, task variety) and formal role and work interactions (i.e., social support, feedback), Second, the level of safety depends on interpersonal relationships (i.e., social support) and management style (i.e., feedback). Third, the level of availability depends on physical resources (i.e., learning opportunities), cognitive and emotional resources (May et al., 2004). Kahn (2007), also found that positive and helpful relationships are keys to developing all three psychological conditions for work engagement, emphasizing the importance of job resources feedback and social support. We argue that there is a positive relation between job resources on the one hand, and psychological availability, -meaning and -safety on the other hand. Higher job resources will, for example, contribute to a working environment where employees may experience psychological safety, meaning and availability, leading in turn to work engagement (Bedarkar & Pandita, 2013).

May, Gilson and Hartner (2004) tested Kahn's (1990) qualitative model and supported the positive relations of all three psychological conditions with work engagement. Of these conditions, the most scholarly attention has been given to psychological meaningfulness. It has been suggested by Job Characteristics Theory that meaningfulness mediates the relationship between motivational characteristics like skill variety, task identity and task significance and work outcomes (Hackman & Oldham, 1976). Other psychological research suggests that job resources like autonomy and feedback also impact work outcomes through

experienced meaningfulness (Humphrey, Nahrgang, & Morgeson, 2007). Meaningful work is a major predictor of several positive personal and organizational outcomes (job satisfaction and performance, longer tenure and lower levels of job stress) (Humphrey et al., 2007), and is an important psychological condition for people's engagement in their work (Christian, Garza & Slaughter, 2011).The above mentioned research suggests a relationship between job resources and psychological meaningfulness, safety and availability on the one hand, and a relationship between these three psychological conditions and work engagement on the other hand. Therefore, we assume that:

(H3) Psychological availability, meaning and safety mediate the relationship between job resources and work engagement.

By way of summary, the hypotheses are graphically displayed in figure 1.

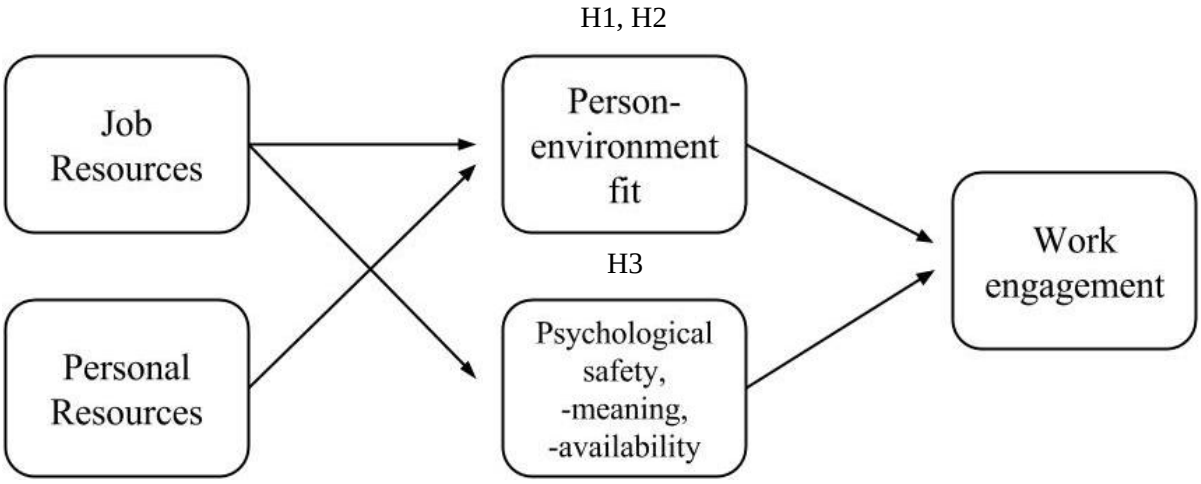

Figure 1. The theoretical model.

Method

Participants and procedure

The sample of the current research consisted of 188 (ex-)trainees who were in their first to fifth year of employment at a Dutch bank. Note: the traineeship in this case covers only the first four years of employment. An online survey was posted and emailed to all of them (n = 188), and 55% (n = 104) completed the survey. 70.2% of the participants were men. The average age of the sample was 28 years (range 22-34, SD = 2.2). Mean time of employment at the company was 2.25 years (range 1 month - 6 years, SD = 1.7).

Measures

Work engagement. Work engagement was measured by the short version of the Utrecht Work Engagement Scale (UWES-9: Schaufeli, Bakker & Salanova, 2006). It consisted of nine items, with three sub-scales: vigor (i.e., "When I get up in the morning, I feel like going to work"), dedication (i.e., "I am proud of the work that I do") and absorption (i.e., "I get carried away when I'm working"). Each of the sub-scales was assessed with three items. The items were rated on a seven-point frequency-based scale ranging from 0 (never) to 6 (daily).

Job Resources. *Job control* was measured by using task control and timing control as comprehensive and specific indicators of job control (Jackson, Wall, Martin & Davis, 1993). The scale included five items; example items are: 'I can vary how I do my work' (task control), 'I decide when to start a piece of work' (timing control). Participants responded on a 5-point scale which ranged from 1 (not at all) to 5 (a great deal). *Feedback* was measured with the 4-item scale of Hackman and Oldham (1975). This scale assesses feedback from the job itself (i.e., "Doing the job itself provides me with information about my work performance"), as well as feedback from others (i.e., "The supervisors and co-workers on this job almost never give me any feedback about how well I am doing in my job") Participants responded on a 7-point scale that ranged from 1 (totally disagree) to 7 (totally agree). The remaining three job resources - learning opportunities, task variety and social support - were adapted from the Dutch Questionnaire on the Experience and Evaluation of Work (Van Veldhoven & Meijman 1994; Van Veldhoven, de Jonge, Broersen, Kompier & Meijman 2002). *Learning opportunities* included four items. Example items are "Does your work give you the feeling that you can achieve something?" and "Does your job offer you opportunities for personal growth and development?". *Task variety* consisted of six items (i.e., "Does your work require creativity?" and "In your work, do you repeatedly have to do the same things?"). *Social Support* included seven items regarding personal relationships with colleagues (i.e., "Are your colleagues friendly toward you?") and task related support (i.e., "Can you count on your colleagues when you come across difficulties in our work?"). All items of these three job resource were rated on a four-point scale ranging from 0 (never) to 3 (always).

Personal resources. Proactive coping was measured by using the 14-item measure of Greenglass, Schwarzer, Jakubiec, Fiksenbaum & Taubert (1999). Example items are "When I experience a problem, I take the initiative in resolving it," and "I visualize my dreams and try to achieve them." All items were rated on a four-point scale ranging from 0 (not at all true) to

3 (completely true). *Flexibility* was measured with the three-item measure developed by Schaufeli (2015). An example item is: "If my work calls for it, I'm willing to overturn my planning." Items were rated on a five-point scale ranging from 1 (completely disagree) to 5 (completely agree).

Person-environment fit. To measure person-environment fit, the nine-item subjective fit perception measure developed by Cable and DeRue (2002) was used. It consists of three sub-scales: person-organization fit (i.e., "My personal values match my organization's values and culture"), needs-supplies fit (i.e., "There is a good fit between what my job offers me and what I am looking for in a job"), and demands-abilities fit (i.e., "The match between the demands of my job and my personal skills is very good"). All items were rated on a six-point scale ranging from 1 (strongly disagree) to 6 (strongly agree).

Psychological meaningfulness, psychological safety and psychological availability were measured with fourteen items drawn from May et al. (2004). *Psychological meaning* consisted of six items (i.e., "The work I do on this job is very important to me"). Three items measured *psychological safety* (i.e., "I am afraid to express my opinions at work"), and *psychological availability* was measured by 5 items (i.e., "I am confident in my ability to deal with problems that come up at work"). All items were rated on a five-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Cronbach's Alpha values for all variables are given in table 2.

Data analysis

After importing the data into SPSS (version 22.0), the reliabilities of multi-item scales were assessed by computing internal consistencies, as indicated by Cronbach's Alpha values. All scales except psychological safety, psychological availability and flexibility had acceptable alpha values which were greater than the suggested cut-off level of 0.7 (Hair, Anderson, Thatham & Black, 1998), ranging from .70 to .89. To improve the reliability of the psychological safety scale from .55 to .62, one item has been removed ("I am not afraid to be myself at work"). Subsequently the interdependence of scales was tested by the use of factor analysis.

Results

Descriptive statistics

The means, standard deviations and correlations of the variables are presented in table 2. Engagement was, as expected, positively and significantly correlated with all personal resources and job resources except job control. Psychological meaning correlated higher than .60 with the predictors person-environment fit and learning opportunities, which potentially might indicate multicollinearity. Trainees scored an average 4.56 on the work engagement scale, significantly higher than the norm for employees established by Schaufeli and Bakker (2003), $t(103) = 11.45$, $p < .001$.

An unrotated second-order factor analysis including all job resources and personal resources scales revealed two factors, according to our expectations, which explained 52.90% of the variance (see table 1). Factor scores were computed for job resources and personal resources so that instead of including separate job and personal resources, only two composite scores could be used in the analyses below. An unrotated second-order factor analysis that included the scales for psychological meaning (factor load: .60), safety (.60) and availability (.81) revealed one factor, which explained 45.78% of the variance. Likewise a factor score was computed for each participant that was dubbed 'psychological readiness'.

Table 1. *Unrotated second-order factor analysis for the job and personal resources variables.*

Scales	Factor 1	Factor 2
Learning opportunities	**.65**	-.41
Social support	**.64**	.05
Task variety	**.81**	-.27
Job control	**.55**	-.30
Feedback	**.64**	.09
Proactive coping	.49	**.60**
Flexibility	.45	**.59**
Self-values (eigenvalues)	2.65	1.06
Variance explained (%)	37.81	15.10

Table 2. Means, standard deviations and correlations between the study variables (N =104).

Variables	*Range*	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1. Learning opportunities	0-3	2.33	.47	(.75)											
2. Social support	0-3	2.53	.36	.35**	(.76)										
3. Task variety	0-3	2.03	.45	.56**	.35**	(.72)									
4. Job control	1-5	2.94	.64	.20*	.18	.48**	(.84)								
5. Feedback	1-7	4.13	.87	.27**	.36**	.39**	.23*	(.70)							
6. Person-environment fit	1-6	3.62	.64	.56**	.40**	.51**	.28**	.25**	(.89)						
7. Ps. meaning	1-5	2.88	.50	.61**	.23*	.39**	.24*	.20*	.65**	(.88)					
8. Ps. safety	1-5	3.23	.72	.21*	.40**	.36**	.22*	.29**	.14	.04	(.62)				
9. Ps. availability	1-5	3.16	.39	.11	.39**	.26**	.27**	.30**	.27**	.25**	.25*	(.69)			
10. Engagement	0-7	4.56	.73	.54**	.43**	.34**	.14	.31**	.70**	.60**	.13	.42**	(.86)		
11. Proactive coping	0-3	2.40	.29	.08	.18	.23*	.22*	.32**	.29**	.24*	.31**	.45**	.34**	(.75)	
12. Flexibility	1-5	3.15	.52	.16	.25**	.28**	.05	.13	.29**	.17	.24*	.27**	.28**	.27**	(.66)

Note: Cronbach's alphas are on the diagonal in parentheses. ***p* < .05; ****p* < .01.

Testing the hypothesized model

Hypothesis 1 stated that person-environment fit mediates the relationship between job resources and work engagement. To test for mediation, we conducted the Preacher and Hayes (2008) mediation analysis, with job resources and person-environment fit as predictors for work engagement. For every regression analysis we conducted, we controlled for age, department, tenure and gender, which never significantly contributed to the equation. As table 3 and figure 2 illustrate, job resources were significantly related to both the proposed mediator person-environment fit and work engagement. Additionally, person-environment fit was significantly related to work engagement, even while controlling for job resources. The relationship between job resources and work engagement was weaker in this analysis compared to the direct relationship, suggesting a partial mediation and thereby confirming Hypothesis 1.

Table 3. *Hierarchical regression analysis of job resources and person-environment fit on engagement*.

	B	**SE B**	**β**	**R^2**	**ΔR^2**
Step 1				***.31****	***.31****
Job resources	***.56****	***.08***	***.56****		
Step 2				***.51****	***.21****
Job resources	***.21****	***.09***	***.21****		
Person-environment fit	***.57****	***.09***	***.57****		

** p < .05; ** p < .01; *** p < .001, N=104.*

To further examine these results, we analyzed the mediation of person-environment fit on work engagement for all five separate job resources separately. All job resources except job control complied with the conditions for mediation of Baron and Kenny (1986). Person-environment fit fully mediated the relationship between task variety and work engagement by reducing its coefficient from .34 ($p < .001$) to -.01 (n.s.), and the relationship between feedback and work engagement by reducing its coefficient from .30 ($p < .01$) to .14 ($p = .06$). Person-environment fit partially mediated the relationship between learning opportunities and work engagement by reducing its coefficient from .53 ($p < .001$) to .22 ($p < .05$), and the relationship between social support and work engagement by reducing its coefficient from .43 ($p < .001$) to .18 ($p < .05$). Because the relationship between job control and work

engagement was not significant (β = .14, n.s.), we could not confirm a mediation effect of person-environment fit on this relationship.

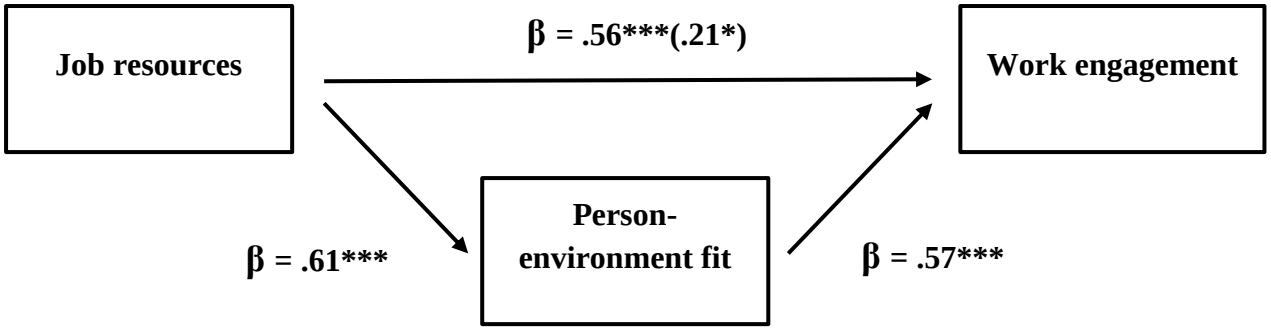

Figure 2. The mediating effect of person-environment fit on the relation between job resources and work engagement. * p < .05; ** p < .01; *** p < .001.

Hypothesis 2 stated that person-environment fit mediates the relationship between personal resources and work engagement. Again, we conducted the Preacher and Hayes (2008) mediation analysis, entering personal resources and person-environment fit as predictors for work engagement. Contrary to our expectations, personal resources were not significantly related to either person-environment fit or work engagement, see table 4 and figure 3. Although person-environment fit showed a strong significant relation to work engagement, this model could not comply with the conditions for mediation of Baron & Kenny (1986). Thereby, Hypothesis 3 was rejected. To analyze the unique effect of person-environment fit on work engagement, we used a multiple enter regression with engagement as dependent variable and person-environment fit, job resources and personal resources as independent variables to reveal a strong significant effect of person-environment fit (β = .58, p < .001).

Table 4. *Hierarchical regression analysis of personal resources and person-environment fit on engagement*.

	B	**SE B**	**β**	**R^2**	**ΔR^2**
Step 1				***.004***	***.004***
Personal resources	***.07***	***.10***	***.07***		
Step 2				***.50******	***.49******
Personal resources	***.11***	***.07***	***.11***		
Person-environment fit	***.70******	***.07***	***.70******		

*** *p < .001, N=104.*

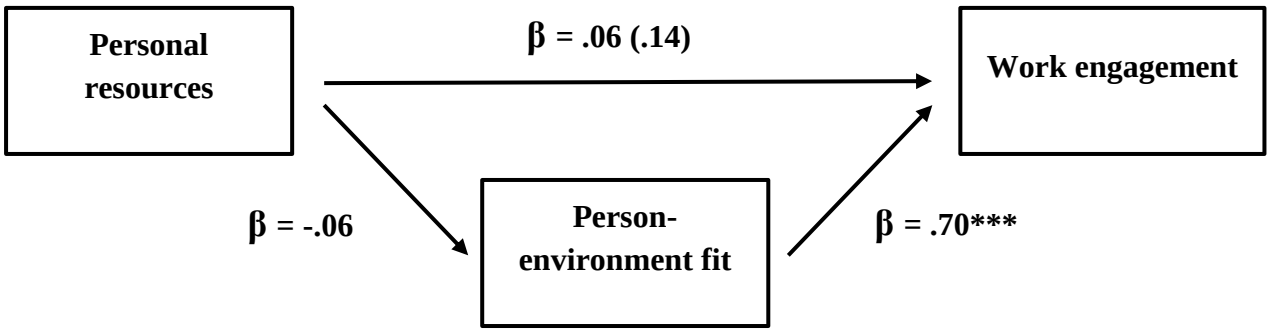

Figure 3. The mediation model of person-environment fit on the relation between job resources and work engagement. *** $p < .001$.

Hypothesis 3 stated that psychological availability, meaning and safety mediates the relationship between job resources and work engagement. We used the Preacher and Hayes (2008) mediation analysis, with job resources and the composite variable psychological readiness as predictors for work engagement. As table 5 and figure 4 illustrate, job resources were significantly related to both the proposed mediators, represented by psychological readiness, and work engagement. Additionally, psychological readiness was significantly related to work engagement, even while controlling for job resources. The relationship between job resources and work engagement was weaker in this model compared to the direct relationship, suggesting a partial mediation and thereby confirming Hypothesis 3.

Table 5. *Hierarchical regression analysis of job resources and psychological readiness on engagement*.

	B	SE B	β	R^2	ΔR^2
Step 1				***.31****	***.31****
Job resources	***.56****	***.08***	***.56****		
Step 2				***.37****	***.07****
Job resources	***.31****	***.11***	***.31****		
Psychological readiness	***.35****	***.11***	***.35****		

** $p < .01$; *** $p < .001$, $N=104$.

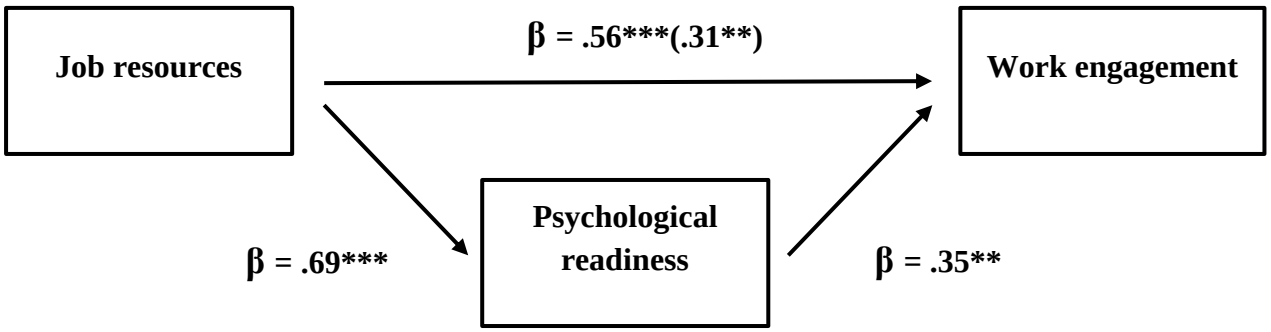

Figure 4. The mediating effect of psychological readiness on the relation between job resources and work engagement. ** $p < .01$; *** $p < .001$.

To further examine these results, we analyzed the mediation of psychological readiness on the relationship between job resources and work engagement for all three psychological states separately. Psychological meaning showed to have the strongest partially mediating effect on the relationship between job resources and work engagement by reducing its regression coefficient from .56 ($p < .001$) to .34 ($p < .001$). Psychological availability also partially mediated this relationship, reducing the coefficient of job resources from .56 ($p < .001$) to .46 ($p < .001$). Psychological safety was not related to work engagement ($\beta = -.16$, $p = .07$), thereby excluding the possibility of a mediation effect.

By using a multiple enter regression analysis with job resources, personal resources, psychological meaningfulness, -safety and availability as independent variables and work engagement as dependent variable we analyzed the unique effects of all independent variables on work engagement. Interestingly, only job resources ($\beta = .31$, $p < .01$) and psychological meaningfulness ($\beta = .42$, $p < .001$) were significantly associated with work engagement. Psychological availability almost reached significance ($\beta = .20$, $p = .05$).

Explorative analyses

To gain further insight into the factors that mediate the relation between job resources and work engagement, we conducted a stepwise hierarchical regression analysis with job resources, person-environment fit and psychological readiness as independent variables and work engagement as dependent variable. Results showed that person-environment fit and psychological readiness together fully mediate the relationship between job resources and engagement, reducing the coefficient of job resources from .56 ($p < .001$) to .04 (n.s.), see table 6 and figure 5.

Table 6. *Hierarchical regression analysis of job resources and psychological readiness on engagement*.

	B	SE B	β	R^2	ΔR^2
Step 1				***.31****	***.31****
Job resources	***.56****	***.08***	***.56****		
Step 2				***.55****	***.24****
Job resources	***.04***	***.10***	***.04***		
Person-environment fit	**.54***	**.09**	**.54***		
Psychological readiness	***.27****	***.09***	***.27****		

*** $p < .001$, N=104.

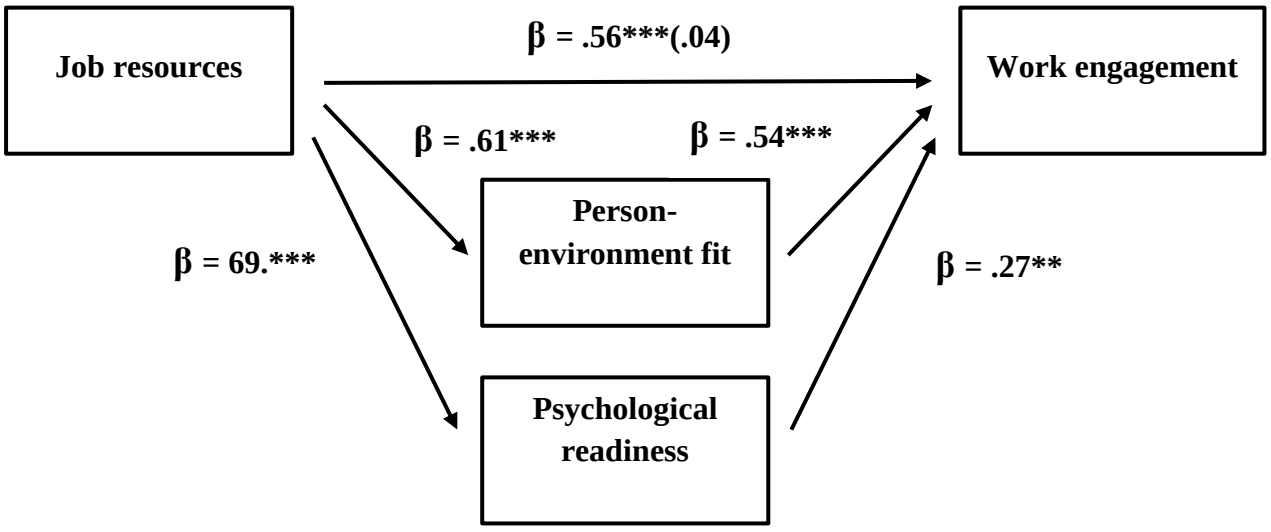

Figure 5. The mediation model of person-environment fit and psychological readiness on the relation between job resources and work engagement. ** $p < .01$; *** $p < .001$.

When we examined the mediation effects of each psychological condition separately, meaningfulness (β = .21, p < .05) and availability (β = .21, p < .01) showed a significant relation with work engagement, whereas safety did not (β = -.04, n.s.). To find out if there was an underlying factor that is responsible for the mediation effect we found, we did an unrotated second-order factor analysis including the scales person-environment fit (factor load: .87), psychological meaning (.87) and –availability (.55) and excluding the scale psychological safety. The factor analysis indeed revealed one factor, explaining 60,58% of

the variance. This factor, which we called ‘factor 1’, fully mediated the relationship between job resources and work engagement, see table 7 and figure 6.

Table 7. *Hierarchical regression analysis of job resources and factor 1 on engagement*.

	B	SE B	β	R^2	ΔR^2
Step 1				***.31****	***.31****
Job resources	***.56****	***.08***	***.56****		
Step 2				***.57****	***.26****
Job resources	***.10***	***.09***	***.10***		
Factor 1	**.68***	**.09**	**.68***		

*** $p < .001$, N=104.*

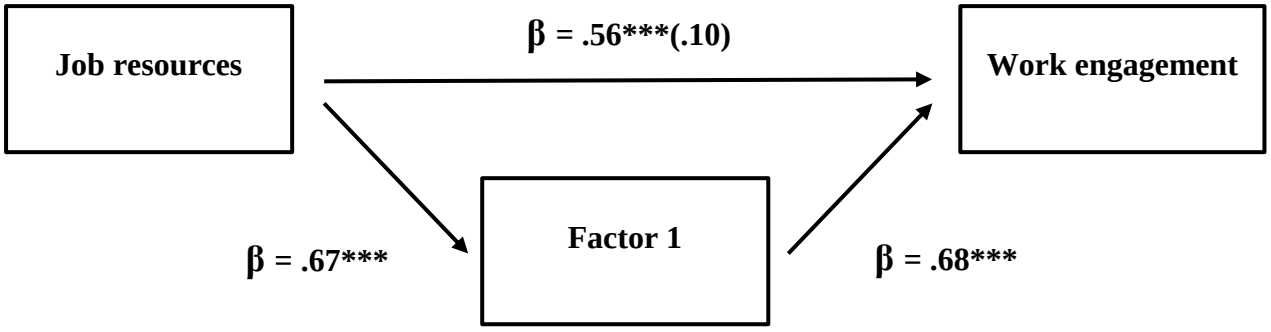

Figure 6. The mediation model of factor 1 on the relation between job resources and work engagement. *** $p < .001$.

Discussion

The purpose of this study was twofold. First, to expand on previous studies on job and personal resources and work engagement within the Job Demands-Resources framework (Schaufeli & Bakker, 2004) regarding trainees. Second, to fit in person-environment fit theory (Cable & DeRue, 2002) and psychological states of engagement theory (Kahn, 1990) as additional influencers of work engagement of trainees. More specifically, the mediating role of person-environment fit and of psychological meaning, -safety and -availability was studied. Results of the study provide several new insights in the work engagement mechanisms of trainees. First, we found that person-environment fit partially mediates the relationship between job resources and work engagement, thus expanding the motivational

process of the JD-R model (Schaufeli & Bakker, 2004). Second, we found the same pattern for psychological meaningfulness and psychological availability, linking Kahn's (1990) engagement theory with the JD-R model. Third, results showed that person-environment fit, psychological meaningfulness and -availability together fully mediate the relationship between job resources and work engagement. Analyses showed that there is one underlying factor responsible for this mediation. Fourth, the current study is the first on work engagement that focuses on young employees participating in a traineeship. Below we will elaborate on each of these results.

The Job Demands-Resources model

Contrary to our expectations, the findings were not completely consistent with the principles of the JD-R model. Firstly, the job resource job control did not show its extensively confirmed relation (i.e., Bakker & Demerouti, 2007; Taris, Schreurs, & van Iersel-van Silfhout, 2001; Bakker, Hakanen, Demerouti & Xanthopoloulou, 2007) with work engagement. An explanation for this might be that trainees, who are relatively new at the company, do not have enough experience yet to effectively work autonomously. In their first few years they may need relatively more guidance to perform optimally and learn all that is needed to in the end perform autonomously as a manager. Therefore, higher job control does not directly lead to higher work engagement for trainees. Several studies using the same scale support this by showing higher levels of job control in older employees. While the trainees in this study scored an average of 2.94 (range 1-5) on job control, a study on Dutch telecom managers (average age of 43 years) showed an average job control score of 3.94 (Salanova & Schaufeli, 2008), and in another study health care personnel (average age of 46.4 years) showed an average job control score of 3.51 (Mauno, Kinnunen & Ruokalainen, 2006).

Secondly, although the personal resources in this study, proactive coping and flexibility, were correlated with work engagement, they showed no predicting effect on work engagement, violating the second assumption of the JD-R model and hence rejecting hypothesis 2. An explanation for this null finding might be that dealing with different projects by using proactive coping and flexibility is less important for engagement as we initially thought. There may be a pattern similar to job control, arguing that during the first few years of a traineeship it may be more important for trainees to fit in and do what is asked, rather than bending the rules and doing their job autonomously.

Work engagement and person-environment fit

Based on previous research (Chen, et al., 2014; Kristof-Braun et al., 2005; Lauver & Kristof-Brown, 2001; Laschinger et al., 2006), we explored whether person-environment fit might act as a link between personal and job resources, and work engagement.

Unfortunately, the absence of a relation between personal resources and work engagement prevented us from testing a (partial) mediation of person-environment fit. However, results showed a direct relationship between person-environment fit and engagement, even when controlled for job and personal resources. This suggests that trainees with a higher perceived person-environment fit are more engaged in their work, independently from their level of resources. Additionally, person-environment also mediated the relationship between job resources and work engagement.

More specifically, the effect of task variety and feedback on work engagement was fully mediated. This suggests that having a varied job and receiving feedback from colleagues does not directly lead to work engagement, but leads to higher perceived fit with the work environment which in turn leads to higher work engagement of trainees. The effects of social support and learning opportunities on work engagement were partially mediated, suggesting the same pattern. These findings are consistent with research of Laschinger et al. (2006), who found that empowering working conditions lead to work engagement through person-job fit.

An explanation for this pattern of results may be that trainees, in the early stage of their career, favor a job that provides them with a lot of learning opportunities, feedback, social support and task variety. One can argue that precisely these resources are essential for reaching their main goal during the traineeship: learning and developing themselves. Therefore, when these job resources are provided, they perceive the environment as fitting to their own needs, abilities and values and get more engaged.

Work engagement & psychological meaningfulness, -availability and -safety

Based on previous research (Bedarkar & Pandita, 2013; Hackman & Oldham, 1976; Kahn, 1990; May et al., 2004; Humphrey et al., 2007; Christian et al., 2011), we explored whether Kahn's psychological states, combined in the composite variable psychological readiness, may act as a link between job resources and work engagement.

The relation between job resources and work engagement was partially explained by psychological readiness. When we separated the three facets of psychological readiness, meaningfulness and availability both showed a partial mediation effect. In contrast, the third aspect – psychological safety – neither showed a mediation effect, nor a relation to work

engagement, contradicting the findings of May et al. (2004). A possible reason for this could be that the psychological safety scale was not very reliable, after reducing the amount of items from three to two its Cronbach's Alpha was only .62. The low number of items may also have harmed the validity of the scale, making it more difficult to find a consistent pattern regarding psychological safety. For trainees, these conditions seem to be related to resources that stimulate learning and development.

Psychological meaningfulness showed the strongest mediating effect, suggesting that trainees who have more job resources see their work as more meaningful and therefore experience a higher level of work engagement. This reinforces previous research of Christian et al. (2011), who found that work engagement is more strongly related to job characteristics that are associated with the perception of meaningfulness. Additionally, May et al. (2004) found that meaningfulness fully mediates the relations of the five core job dimensions of Hackman and Oldham's (1980) Job Characteristics Model (skill variety, task identity, task significance, autonomy and feedback) with work engagement. This suggests that organizations might be able to "set the stage for engagement" by creating contextual conditions that facilitate trainees' perceptions of meaningful work.

The mediating role of psychological availability suggests that trainees who have access to more job resources experience a higher psychological availability to do their work, and are therefore more engaged in their work. Binyamin and Carmeli (2010) found that lower perceived stress and uncertainty lead to higher psychological availability. The researched job resources may be responsible for this process by making trainees' jobs more clear and less difficult, thereby decreasing uncertainty and stress. This may provide them with more psychological energy or availability to engage in their work. A similar process is described by May et al. (2004), who found that the amount of an employees' cognitive, emotional and physical resources has a strong effect on psychological availability. More specifically, excessive amounts of stress, emotional exhaustion and injuries could prevent individuals from being available for their roles. Therefore, jobs may be designed in such a way that they provide trainees with the right job resources to reduce stress and uncertainty and to ensure psychological availability of trainees.

Psychological states & person-environment fit

When we combined the two previously discussed pathways, person-environment fit, psychological availability and –meaningfulness together showed to fully mediate the relationship between job resources and work engagement. All three variables were uniquely

associated with work engagement, explaining a meaningful 58% of the variance, while person-environment fit accounted for almost 3 times the variance of both other variables. These results suggest that job resources may alter the perception of fit with the work environment, expressed by person-environment fit, psychological meaningfulness of the job and psychological availability, which in turn fosters work engagement. This would mean that not the job resources of the JD-R model, but this specific perception influences work engagement. Because a factor analysis over these three perceptions revealed one factor, there may be one underlying perception of fit with the work environment through which job resources influence work engagement. Future research could benefit from examining this perception and its underlying mechanisms, since it may be an important predictor of work engagement.

Limitations and suggestions for future research

The conclusions from this study need to be taken with a number of limitations. First, the design of the study was cross-sectional, making it impossible to find causal relations between the research variables. Longitudinal research, using more than one measurement moment, can reveal causal relations between for example the specific job resources and person-environment fit, and job resources and psychological availability and -meaningfulness.

Second, the sample was from one company (a Dutch bank) and was mostly male. Given the fact that the participants worked at the same company and perhaps shared a very similar work culture, results may have been skewed in one direction, resulting in sample bias. Since traineeships and trainees differ between companies and sectors, results can be limitedly generalized. Future research among trainees at multiple companies is needed to gain insight into the mechanisms of work engagement in trainees on a broader level.

Third, personal resources unexpectedly showed no relation to work engagement, person-environment fit or psychological readiness. Therefore, we could not analyze the possible mediating effects of person-environment fit and psychological readiness on the relationship between personal resources and work engagement. Future research should use different personal resources as proactive coping and flexibility seem to have little use for trainees. For example, self-efficacy and resilience can be used, since Akkermans, Brenninkmeijer, Schaufeli and Blonk (2014) showed that these are important personal resources for young employees. By including personal resources that affect work engagement of trainees in future research, more knowledge can be gained about the exact role of person-environment, psychological meaning and –availability in the motivational process of trainees.

Theoretical and practical implications

Our study contributes to the literature in several ways. First, we applied the JD-R model on trainees, something that has never been done before. Results show that the JD-R model (Schaufeli & Bakker, 2004) works best when tailored to the specific situation of the target group. In this case, young starting employees seem to benefit only from specific job resources that foster learning and development. Secondly, we gained more insight in mechanisms of JD-R model, adding person-environment fit as an important perception through which job resources influence work engagement. Thirdly, this study is the first to integrate Kahn's psychological conditions in the JD-R model. Our findings show that these conditions play an important role in the motivating process of the JD-R model.

Our results suggest that job resources related to learning and development are associated with higher person-environment fit, psychological meaning, -availability and work engagement. This means that organizations should focus on giving trainees more access to these job resources. For example, by providing them with more relevant trainings to improve learning opportunities, instructing the team they work in to give them more feedback and social support and giving them extra tasks apart from their projects to improve task variety. Another way in which organizations could improve access to these job resources is by selecting projects for trainees that provide them with a high level of feedback, social support, task variety and learning opportunities. To monitor trainees' access to these job resources, it may be wise to regularly conduct a short survey and possibly intervene if access is not sufficient.

Because person-environment fit and psychological meaningfulness showed to stimulate work engagement, organizations may benefit from determining extensively which project best suits a trainee. This could happen in cooperation with the trainee in question and the fit could be assessed on the axes of needs-supplies fit, demands-abilities fit, and meaningfulness of the work to the trainee. In this way organizations may be able to improve the work engagement of their trainees by improving their person-job fit and perceived meaningfulness.

Conclusions

This is the first study of which we are aware that has explored the mechanisms that explain the work engagement of trainees. The results provide support for both the JD-R model and Kahn's theory of work engagement and show that person-environment fit, psychological meaning and -availability play an important role in the work engagement process of trainees.

These findings provide new insights into the motivational process of the JD-R model, suggesting that job resources may alter the perception of the work environment which in turn fosters work engagement. More specifically, especially job resources that foster learning and development (i.e., task variety, feedback, social support and learning opportunities) are important for trainees in this process whereas other job resources (i.e., job control) seem to be less important**.** Therefore, the JD-R model should be adjusted to trainees by including only job resources that are needed for learning and development. Further research is needed to determine which personal resources are most important for trainees and to reveal the exact mechanisms of this perception of the work environment.

The results of this study emphasize the importance of creating an engaging, satisfying workplace for trainees. Multinationals are currently facing a severe shortage of talent (Bhatnagar, 2004; Brewster et al., 2005) and therefore it is crucial to ensure that work environments allow trainees to feel empowered to do their work and develop in optimal ways that engage them and foster satisfaction with their work. Companies will need to focus on providing their trainees with the right job resources, to make sure they experience meaning in their work and are psychological available to improve their engagement.

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Attachment 1: the questionnaire

Invitation email

Subject: How engaged are you in your work? – Asking for your help

Dear (ex-)trainee,

How engaged are you in your work? Are (ex-)trainees more engaged than other employees? And how can you raise your work engagement*?

I want to answer these questions with my Master Thesis. That is why I am asking for your help: can you fill in a short survey about your job?

I will send you the most important findings and if you want, I can also tell you whether your personal work engagement level is below or above average compared to other Dutch employees.

Thank you in advance, your input is highly appreciated and will help me to graduate! Please click on this link to open the survey.

Kind Regards,

Wimme Klaver, intern Managers Development & KP experts

*Research shows that work engagement is positively correlated with innovativeness, employee health, proactive behavior and financial performance.

Welcome message

Thank you for participating in this study.

The following questionnaire will be about your current working situation. Please complete the questionnaire on your own and please be honest. The questions concern your own experiences and opinions. This means there are no right or wrong answers, only answers that describe your working situation better than others.

Your answers will be used solely for the purposes of my Master Thesis and will be handled strictly confidential so that your identity remains completely anonymous. The questionnaire will take about 15 minutes. Carefully read every instruction, because the answer possibilities differ sometimes.

Should you have any questions regarding this survey, please do not hesitate to contact me on wimme.klaver@ing.nl

Thank you very much for participating!

1. Background information

1 What is your gender?	❒ male ❒ female
2 When did you start your traineeship at ING?	…… (Month & year)
3 In which department of ING do you work?	❒ IT ❒ Retail Banking ❒ Commercial Banking ❒ Risk ❒ Finance ❒ Other:…….
4 According to your contract, how many hours do you work per week?	… ..hours
How many hours do you really work per week (on average)?	…..hours
5 What is your mother tongue?	❒ Dutch ❒ non-dutch
7 What is your date of birth?	…./…./……..

2. Your job

The following questions concern your current job and work environment. Please indicate the frequency of the following experiences in your job: (Always/often/sometimes/never).

Task Variety

In your work, do you repeatedly have to do the same things?

Does your work require creativity?

Is your work varied?

Does your work require personal input?

Does your work make sufficient demands on all your skills and capacities?

Do you have enough variety in your work?

Learning opportunities

Do you learn new things in your work?

Does your job offer you opportunities for personal growth and development?

Does your work give you the feeling that you can achieve something?

Does your job offer you the possibility of independent thought and action?

Social support

Can you count on your colleagues when you come across difficulties in your work?

If necessary, can you ask your colleagues for help?

Do you get on well with your colleagues?

Do you have conflicts with your colleagues?

In your work, do you feel appreciated by your colleagues?

Are your colleagues friendly towards you?

Is there a good atmosphere between you and your colleagues?

Job control
Please indicate how much the following statements apply to you at your current job (from 1, not at all, to 5, a great deal).

1. I decide on the order in which I do things
2. I decide when to start a piece of work
3. I can vary how I do my work
4. I can plan my own work
5. I can choose the methods to use in carrying out my work

Feedback
Please indicate how much you agree with the following statements (from 1, totally disagree, to 7, totally agree).

1. Doing the job itself provides me with information about my work performance
2. The supervisors and co-workers on this job almost never give me any feedback about how well I am doing in my job
3. The job itself provides very few clues about whether or not I am performing well
4. Supervisors often let me know how well they think I am performing the job.

3. You and your job

Person-job fit
The following statements deal with how you see your job. Please indicate how much you agree with these statements by choosing the best matching number from 1 to 6. 1= strongly disagree and 6= strongly agree.

Person–organization fit:
1. The things that I value in life are very similar to the things that my organization values
2. My personal values match my organization's values and culture
3. My organization's values and culture provide a good fit with the things that I value in life

Needs–supplies fit
1. There is a good fit between what my job offers me and what I am looking for in a job
2. The attributes that I look for in a job are fulfilled very well by my present job
3. The job that I currently hold gives me just about everything that I want from a job

Demands–abilities fit.
1. The match is very good between the demands of my job and my personal skills
2. My abilities and training are a good fit with the requirements of my job
3. My personal abilities and education provide a good match with the demands that my job places on me

Psychological states The following statements are about how you experience your job. Please indicate how much you agree with these statements by choosing the best matching number from 1 to 5. 1= strongly disagree and 5= strongly agree.

Psychological meaningfulness

1. The work I do on this job is very important to me
2. My job activities are personally meaningful to me
3. The work I do on this job is worthwhile
4. My job activities are significant to me
5. The work I do on this job is meaningful to me
6. I feel that the work I do on my job is valuable

Psychological safety

1. I am not afraid to be myself at work
2. I am afraid to express my opinions at work
3. There is a threatening environment at work

Psychological availability

1. I am confident in my ability to handle competing demands at work
2. I am confident in my ability to deal with problems that come up at work
3. I am confident in my ability to think clearly at work
4. I am confident in my ability to display the appropriate emotions at work
5. I am confident that I can handle the physical demands at work

4. Well-being at work

The following statements are about how you feel at work. Please read each statement carefully and decide if you ever feel this way about your job. If you have never had this feeling, cross the "0" (zero) in the space after the statement. If you have had this feeling, indicate how often you feel it by crossing the number (from 1 to 6) that best describes how frequently you feel that way.

Never	0
Almost never (once a year)	1
Rarely (once a month or less)	2
Sometimes (a few times a month)	3
Often (once a week)	4
Very often (a few times a week)	5
Always (daily)	7

1. _____ At my work, I feel bursting with energy

2. _____ At my job, I feel strong and vigorous

3. _____ I am enthusiastic about my job

4. _____ My job inspires me

5. _____ When I get up in the morning, I feel like going to work

6. _____ I feel happy when I am working intensely

7. _____ I am proud of the work that I do

8. _____ I am immersed in my work

9. _____ I get carried away when I'm working

Proactive coping
The following statements deal with reactions you may have to various situations at your work. Indicate how true each of these statements is by checking the most appropriate box (not at all true, barely true, somewhat true, completely true).

1 I am a "take charge" person.
2 I try to let things work out on their own.
3 After attaining a goal, I look for another, more challenging one.
4 I like challenges and beating the odds.
5 I visualize my dreams and try to achieve them.
6 Despite numerous setbacks, I usually succeed in getting what I want.
7 I try to pinpoint what I need to succeed.
8 I always try to find a way to work around obstacles; nothing really stops me.
9 I often see myself failing so I don't get my hopes up too high.
10 When I apply for a position, I imagine myself filling it.
11 I turn obstacles into positive experiences.
12 If someone tells me I can't do something, you can be sure I will do it.
13 When I experience a problem, I take the initiative in resolving it.
14 When I have a problem, I usually see myself in a no-win situation.

Flexibility
The following statements deal with reactions you may have to various situations during work. Please indicate how much you agree with these statements. 1=completely disagree, 2=disagree, 3=neither agree, nor disagree, 4=agree, 5=completely agree.

1. If my work calls for it, I'm willing to overturn my planning
2. I adapt smoothly to changes in my job
3. I do not have problems changing the way I work

CHECK yes, I want to receive the findings of this research (email address:)
CHECK yes, I want to receive my personal work engagement score

You have now reached the end of the questionnaire. Thank you!