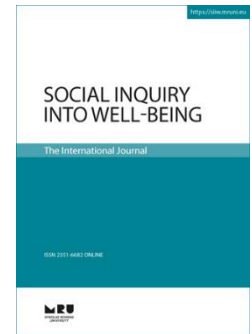




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## Social Inquiry into Well-Being



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### Resources linked to Work Engagement: The Role of High Performance Work Practices, Employees' Mindfulness, and Self-concept Clarity

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#### Abstract

Work engagement is an important component of individual's well-being at work, it promotes one's advancement, performance and ability to cope with challenges. Thus, scholars have become increasingly interested what factors promote employees' work engagement. There is a variety of possible job and personal resources that might contribute to the development of work engagement. However, only a few studies have outlined the significance of high performance work practices, employees' mindfulness and self-concept clarity in relations to work engagement. Therefore, the purpose of the current study was to analyze if high performance work practices, employees' mindfulness, and self-concept clarity are linked to work engagement. Employees (N = 125) from various private sector organizations filled anonymous questionnaires. The results have revealed that components of work engagement were positively related to self-concept clarity and one of the high performance work practices (namely, motivation). Thus, self-concept clarity and motivation might play an important role in employees' well-being at work. However, a longitudinal, or an interventional, study is needed to further explain the causality of engagement and other study variables.

*Keywords:* work engagement, high performance work practices, mindfulness, self-concept clarity, employees

#### Introduction

Contemporary organizations face challenges every day. Globalization, innovations, expansion of informational technologies, as well as increased prevalence of non-standard work affects employees' work performance and their psychological adjustment (Kira, Van Eijnatten, & Balkin, 2010). The complexity of modern work reality raises a question of what possible management strategies and innovations could be implemented to enhance employees' work engagement with the optimal proportion of resources, efforts, and gain. Work engagement, which is defined as a positive, fulfilling, work-related state of mind, operationalized by vigor, dedication, and absorption

(Schaufeli, Salanova, González-Roma, & Bakker, 2002), is one of the key determinants of well-being at work (Bakker, 2011). The construct is widely investigated for practical reasons and have become a relevant subject due to its links with such outcomes as work performance (Lin et al, 2016), acceptance of extra-roles at work (Demerouti, Bakker, & Gevers, 2015), and productivity (Harter, Schmidt, & Hayes, 2002). It promotes one's advancement and ability to cope with challenges (Bakker, 2011; Sonnentag, Mojza, Binnewies, & Scholl, 2008). Moreover, engaged employees are more prone to experience positive emotions and have better health than their less engaged counterparts (Bakker & Demerouti, 2008). They can be more capable of mobilizing and actively developing new job resources (Hakanen,

Perhoniemi, & Toppinen-Tanner, 2008). Thus, scholars are eager to understand, what factors contribute to work engagement.

Most often, work engagement is analyzed in the context of Job Demands-Resources (JD-R) theory (Bakker & Demerouti, 2014), which is an extension of the Job Demands-Resources model (Bakker & Demerouti, 2007). JD-R theory (Bakker & Demerouti, 2014) explains the potential of job-related and personal resources in motivating employees and promoting their wellness (i.e., motivational process), while various job demands may lead to resource loss, such as health problems and burnout (i.e., health impairment process). Ten years of research on work engagement revealed the flexibility and adjustability of JD-R theory (Bakker & Demerouti, 2016). More specifically, it is possible to not only test the overall theory, but also its separate parts. In this study, we aim to analyze the interplay of three components of the theory: work engagement, job resources, and personal resources. We propose that perceived high performance work practices as motivation, ability, and opportunity might be viewed as job resources, while mindfulness and self-concept clarity might serve as two personal resources that represent one's ability to understand oneself and be aware of one's inner and outer environment. Thus, the central question of this study is to analyze whether work engagement is linked to high performance work practices, employee's mindfulness, and self-concept clarity.

### High performance work practices as Job Resources

Job resources refer to physical, psychological, social, or organizational aspects of the job that are functional in achieving work goals and reduce job demands or stimulate personal growth, learning, and development (Bakker & Demerouti, 2007). According to JD-R theory (Bakker & Demerouti, 2014), possible job resources include various organizational factors: career possibilities, safety, financial benefits, social support, job management, autonomy, and feedback, etc. Previous studies have included a number of organizational factors as possible job resources, e.g., team and colleagues support, organization policies, training and career opportunities (Anitha, 2014); human resource development and climate (Chaudhary, Rangneker, & Barua, 2012); career opportunities, autonomy, feedback about work outcomes and development possibilities (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009; Bakker & Demerouti, 2008).

We propose that high performance work practices (HPWP; Kroon, Van De Voorde, & Timmers, 2013) might serve as job resources as they include the innovative human resources management strategies, similar to job resources, as they are organizational aspects of the job that help to achieve work goals and stimulate personal growth, learning, and development: ability (providing employees with learning and abilities development); motivation (motivating salary and career possibilities); and opportunities (opportunity to work in teams and express opinion in company's strategic issues) (Kroon et al., 2013; Appelbaum, Bailey, Berg, & Kalleberg, 2000). The use of HPWP yields better organization performance and financial efficiency (Combs,

Liu, Hall, & Ketchen, 2006). Furthermore, work engagement acts as a full mediator of the effects of HPWPs on job performance and extra-role behavior (Karatepe, 2013), suggesting that HPWPs can be viewed as job resources. Thus, we propose that the components of HPWP, i.e., motivation, ability, opportunity are job resources and hypothesize the following:

*H1: High performance work practices (motivation, ability, opportunity) will be positively linked to the dimensions of work engagement (vigor, dedication, absorption).*

### Mindfulness and self-concept clarity as Personal Resources

In the perspective of JD-R theory (Bakker & Demerouti, 2014), personal resources contain as much value as job resources. Personal resources can be defined as positive self-evaluations that are related to one's capacity to fast recovery, perceive and manage one's abilities, as well as act on work environment (Bakker & Demerouti, 2008). Work engagement is related to such personal resources as self-efficacy, organizational-based self-esteem, optimism (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007), positive affect, and hope (Ouweneel, Le Blanc, & Schaufeli, 2012), etc. However, the links between work engagement and job resources are investigated much more often than personal resources (Saks & Gruman, 2014). Nevertheless, according to Luthans, Norman, Avolio, and Avey study of 2008, there is a diversity of positive psychology constructs and many of them can be investigated as possible personal resources in the perspective of the JD-R model. This study aims to explore mindfulness and self-concept clarity as perspective personal resources that might be linked to work engagement. The two constructs are explained in more detail in subsequent sections.

*Mindfulness as a Resource.* Mindfulness can be defined as the state of being attentive to, and aware of what is taking place in the present internally and externally, in a nonjudgmental or accepting way (Brown & Ryan, 2003). The findings of previous studies suggest that mindfulness could be beneficial for an individual in a number of ways, e.g., it has negative links with anxiety and depressive symptoms (Manotas, Segura, Eraso, Oggins, & McGovern, 2014), and positive links with well-being (Roche, Haar, & Luthans, 2014). However, only a few empirical studies have investigated mindfulness from a workplace perspective (Dane & Brummel, 2014), and research has yet to clarify, how mindfulness is linked to work engagement (Leroy, Anseel, Dimitrova, & Sels, 2013). Nevertheless, it is important to note, that mindfulness is negatively related to – and, when certain interventions are applied, is apt to - reduce symptoms of burnout (Hülshager, Alberts, Feinholdt, & Lang, 2012), which is considered to be an antipode of burnout (Trépanier, Fernet, Austin, & Ménard, 2015). In addition, engaged individuals are immersed in the activities they are doing (Schaufeli et al., 2002), and mindfulness, which represents receptive attention to the present moment might contribute to engagement by enhancing the clarity of one's experience (Brown & Ryan, 2003) and by helping

individuals see existing activities in novel and more interesting ways (Langer & Moldoveanu, 2000). Thus, we hypothesize the following:

*H2: Mindfulness will be positively linked to the dimensions of work engagement (vigor, dedication, absorption).*

*Self-Concept Clarity as a Resource.* While mindfulness refers to being aware of one's presence, both internal and external (Brown & Ryan, 2003), self-concept clarity relates to being aware of one's characteristics across time and is related to internal state awareness (Campbell et al., 1996). Self-concept clarity reflects how clear and confident, internally consistent and temporally stable an individual's self-concept is (Campbell et al., 1996). Self-concept clarity facilitates self-regulation processes and optimal psychological functioning and is necessary for interaction between self-concept and the external environment (Ritchie, Sedikides, Wildschut, Arndt, & Gidron, 2011; Lewandowski, Nardone, & Raines, 2010; Lewandowski & Nardone, 2012). In addition, self-concept clarity is negatively related to stress, anxiety, and depression (Matto & Realo, 2001), and is positively linked to subjective well-being (Ritchie et al., 2011). According to Bakker (2011) stress, increased anxiety, and pressure at work may negatively affect employee's engagement process. In addition, Treadgold (1999) suggests that self-concept clarity is important in motivational processes of employees. Thus, self-concept clarity acts similar to personal resources as they enhance wellness and they enable people to act on their environment (Bakker & Demerouti, 2016). Striving to fulfill the gap of self-concept clarity studies in personal resources field, we include self-concept clarity in our study and hypothesize, that it is positively related to work engagement.

*H3: Self-concept clarity will be positively linked the dimensions of work engagement (vigor, dedication, absorption).*

All in all, there is a variety of possible job and personal resources that might contribute to the development of work engagement (e.g., Demerouti et al., 2015; Anitha, 2014; Xanthopoulou et al. 2009). We propose that high performance work practices (ability, motivation, and opportunity) are job resources and mindfulness and self-concept clarity are two important personal resources that might contribute to employee's work engagement. We believe, that when the environment provides employees with motivation, ability and opportunities, those employees who are aware of who they are (i.e., high in self-concept clarity) and are aware of what happens around them and inside them (i.e., high in mindfulness), would be more engaged in their work activities.

## Method

### Participants

Participants of the present study were 125 employees from various Lithuanian organizations (65.60 % (n = 82) were women and 34.40 % (n = 43) were men). The age of participants ranged from 19 to 57 (M<sub>age</sub> = 32.70; SD<sub>age</sub> = 9.12). Among the participants, 4.80 % (n = 6) were general

managers or CEO, 10.40 % (n = 13) were department managers, 8 % (n = 10) were project managers, 64 % (n = 80) were specialists, 12.8 % (n = 16) were workers. The sample consisted of 29 (23.20 %) leaders and 96 (76.80 %) subordinates from different companies. The majority of participants (84.80 %, n = 106) completed higher education (university or college); 6.40 % (n = 8) completed vocational education, 8 % (n = 10) completed secondary education and 0.80 % (n = 1) had lower than secondary education.

### Procedures

Data was collected in February – March 2015 in a form of an online questionnaire. The organizations were chosen from a catalog of Lithuanian companies of various sectors (real estate, transport and logistics, trade, manufacturing, education, etc.) and letters of invitation to participate and a link to a questionnaire was sent to 406 employees of the chosen companies. 125 questionnaires were completed, giving a response rate of 30.79 percent. All participants were informed that participation was voluntary. Participants had an opportunity to get the summary of results if they provided e-mail addresses (confidentiality was assured). The participants were not paid for participation.

### Measures

The Lithuanian versions of the instruments were prepared with permission from the authors of the measures. Translation/back-translation procedures were performed. In addition, Confirmatory Factor Analysis (CFA) with the Maximum Likelihood estimation in Mplus 6 (Muthén & Muthén 1998–2010) was performed, in order to check the factor structure of Lithuanian version of the measures. Model fit was ascertained using various indices: the Comparative Fit Index (CFI) and the Tucker-Lewis Index (TLI) should exceed .90, and the Root Mean Square Error of Approximation (RMSEA) should be less than .08, Standardized Root Mean Square Residual (SRMR) should not exceed .08 (Byrne, 2012). Also, the  $\chi^2$  (chi-square) value should be non-significant, however, the  $\chi^2$  value is dependent on the sample size and the complexity of the model thus, a value of  $\chi^2/df$  might be counted. For an acceptable data-model fit, the ratio of  $\chi^2/df$  should not exceed 3 (Schermelel-Engel, Moosbrugger, & Muller, 2003).

**Work engagement** was measured with the short version of *Utrecht Work Engagement Scale* (UWES – 9; Schaufeli et al., 2002) that consists of three subscales: (a) vigor (3 items); a sample item is “At my work, I feel bursting with energy”, (b) dedication (3 items); a sample item is “My job inspires me”, (c) absorption (3 items); a sample item is “I am immersed in my work”. All items were scored on a seven-point Likert scale from 0 (never) to 6 (always/every day), higher mean scores of the subscales indicating higher levels of engagement. Cronbach's alphas were .79 for vigor, .81 for dedication and .83 for absorption subscale. The results of CFA indicated that the three-factor structure provided an acceptable fit to the data,  $\chi^2(22) = 55.78$  ( $p < .05$ );  $\chi^2/df =$

2.54; CFI = .95, TLI = .93; RMSEA = .11 [.075; .15]; SRMR = .06.

**Self-concept clarity** was measured using the *Self-Concept Clarity scale* (SCC; Campbell et al., 1996). The scale has a single-factor structure and consists of 12 items; a sample item is „In general, I have a clear sense of who I am and what I am“. All items were scored on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), the higher mean score indicating the greater extent to which an individual’s self-concept is clearly defined and stable. Cronbach’s alpha was .86 in the current study. The results of CFA indicated that one-factor structure was an adequate fit to the data:  $\chi^2(52) = 85.67 (p < .05)$ ;  $\chi^2/df = 1.65$ ; CFI = .95, TLI = .94; RMSEA = .07 [.04; .10]; SRMR = 0.05.

**Mindfulness** was measured with the *Mindful Attention Awareness Scale* (MAAS; Brown & Ryan, 2003), which assesses mindfulness as an individual difference characteristic. The scale has a single-factor structure and consists of 15 items, sample items are „I could be experiencing some emotion and not be conscious of it until sometime later“. All items were scored on a six-point Likert scale from 1 (almost always) to 6 (almost never) to indicate, how frequently certain experiences occurred, higher scores indicating higher tendency to be attentive to and aware of present-moment experiences in daily life (Brown & Ryan, 2003). Cronbach’s alpha was .87 in the current study. The results of CFA indicated, that one-factor structure was a satisfactory fit to the data:  $\chi^2(87) = 148.30 (p < .05)$ ;  $\chi^2/df = 1.70$ ; CFI = .91, TLI = .89; RMSEA = .07 [.054; .01]; SRMR = .07.

**High performance work practices** were measured with High Performance Work Practices Scale (HPWPs; Kroon et al., 2013), which consists of three subscales: (a) ability (5 items) – a sample item is “Employees follow training courses to improve their social skills“; (b) motivation (6 items) – a sample item is “Beside their normal wage,

employees receive a bonus or another financial reward“; (c) opportunity – a sample item is “Employees are involved in policy-making“. Items were scored on a five-point Likert type scale from 0 (this applies to none of the employees) to 4 (this applies to all employees); higher scores indicating greater perceived presence or intensity of high performance work practices. Cronbach’s alphas were .89 for ability, .78 for motivation and .77 for opportunity subscale. The results of CFA indicated that the three-factor structure provided a marginal, but satisfactory fit to the data:  $\chi^2(99) = 208.32 (p < .05)$ ;  $\chi^2/df = 2.10$ ; CFI = .89, TLI = .86; RMSEA = .09 [.08; .11], SRMR = .07.

**Data Analysis.** Data analysis was performed with SPSS 21.0 and Mplus 6 (Muthén & Muthén 1998–2010). Parametric statistic criteria were employed in the study.

**Results**

Table 1 shows the means, standard deviations, and correlations among all study variables. The dimensions of engagement were significantly linked to both organizational and personal factors. Vigor was positively related to all study variables: self-concept clarity, mindfulness, and the subscales of High Performance Work Practices Scale (Kroon et al., 2013) (*r* ranging from .25 to .39). Absorption was also positively related to all study variables (*r* respectively .30; .21; .28; .32; and .25). Dedication was positively related to self-concept clarity, ability, motivation, and opportunity (*r* respectively .30; .45; .45; and .37). Neither self-concept clarity nor mindfulness had significant correlations with high performance work practices but were significantly related with each other (*r* = .54, *s* < .01). There were no significant differences when comparing genders and leaders with non-leaders.

**Table 1.** Summary Data and Intercorrelations Among all Variables

	1	2	3	4	5	6	7	8
1. Vigor	-	.75**	.78**	.32**	.25**	.28**	.39**	.25**
2. Dedication		-	.75**	.30**	.14	.45**	.45**	.37**
3. Absorption			-	.30**	.21*	.28**	.32**	.25**
4. Self-Concept Clarity				-	.54**	.09	.07	.05
5. Mindfulness					-	-.06	-.09	-.14
6. HPWP (Ability)						-	.66**	.70*
7. HPWP (Motivation)							-	.57**
8. HPWP (Opportunity)								-
<i>M</i>	4.60	4.23	4.60	3.30	4.20	3.06	2.93	3.05
<i>SD</i>	1.15	1.44	1.38	0.68	0.71	1.18	0.99	0.98

Note. HPWP - High Performance Work Practices (Kroon et al., 2013).

N = 125

\* p < .05, \*\*p < .01.

It was hypothesized that high performance work practices, self-concept clarity, and mindfulness would be positively linked to the components of work engagement (i.e., vigor, dedication, and absorption). Regression analyses were used to test the hypothesis (see Table 2). As the sample

was quite heterogenous, we included some control variables, namely, gender, age, position, and education, in the first step of regression analysis. In the second step, the components of HPWP, self-concept clarity and mindfulness were added.

**Table 2.** Summary of Hierarchical Multiple Regression Analyses Predicting Work Engagement

Variables	Vigor		Dedication		Absorption	
	B (SE)	$\beta$	B (SE)	$\beta$	B (SE)	$\beta$
<i>Step 1</i>						
Gender	0.11 (0.22)	.04	-0.19 (0.27)	-0.06	-0.13 (0.27)	-.05
Age	0.02 (0.01)	.19	-0.01 (0.02)	-0.05	0.01 (0.01)	.07
Position	-0.14 (0.25)	-.05	-0.50 (0.32)	-0.15	-0.03 (0.31)	-.01
Education	0.01 (0.11)	.01	-0.19 (0.14)	-0.13	-0.07 (0.13)	-.05
<i>Step 2</i>						
Gender	0.05 (0.19)	.02	-0.30 (0.24)	-.10	-0.19 (0.24)	-.07
Age	0.04** (0.01)	.29**	0.01 (0.01)	.08	0.02 (0.01)	.16
Position	0.06 (0.22)	.02	-0.16 (0.28)	-.05	0.25 (0.29)	.08
Education	0.02 (0.09)	.02	-0.18 (0.12)	-.12	-0.07 (0.12)	-.05
Ability	0.00 (0.12)	.01	0.23 (0.15)	.19	0.07* (0.15)	.06
Motivation	0.48** (0.12)	.41**	0.40* (0.15)	.28*	0.36 (0.16)	.26*
Opportunity	0.10 (0.13)	.08	0.15 (0.16)	.10	0.16 (0.17)	.11
Mindfulness	0.27(0.15)	.17	0.09 (0.19)	.05	0.20 (0.19)	.11
Self-Concept Clarity	0.30 (0.16)	.18	0.46* (0.20)	.22*	0.43* (0.21)	.22*

Note. Gender (1 = Male, 2 = Female); Position (1 = leader/management, 2 = employees); Education (1 = University; 2 = College; 3 = Vocational Training; 4 = Secondary and lower). SE – Standard error.  $N = 125$ .

\*  $p < .05$ , \*\* $p < .01$ .

For vigor, the model based on control variables explained vigor at a rate of 4 percent ( $R^2 = .04$ , 95% confidence interval (CI) [-0.02; .10],  $F(4, 124) = 1.33$ ,  $p > .05$ ). In the second step, the analyses revealed that age ( $\beta = .29$ ) and motivation ( $\beta = .41$ ) were significantly linked to vigor. Older employees with higher perceived motivation practices reported being more vigorous while studying. The job and personal resources raised the model's explained variance to 34 percent ( $\Delta R^2 = .30$  ( $p < .01$ );  $R^2 = .34$ , 95% CI [.22; .46],  $F(9, 124) = 6.47$ ,  $p < .05$ ).

For dedication, in the first step of analysis none of control variables were linked to dedication. The model based on control variables explained 4 percent of variance ( $R^2 = .04$ , 95% CI [-0.02; .10],  $F(4, 124) = 1.22$ ,  $p > .05$ ). In the second step, motivation ( $\beta = .28$ ) and self-concept clarity ( $\beta = .22$ ) added additional 25 percent of explained variance ( $p < .01$ ) and raised R square to .29 (CI [.17; .41],  $F(9, 124) = 6.69$ ,  $p < .01$ ).

Finally, similar as in the case of vigor and dedication, none of control variables were linked to absorption in the first step of analysis ( $R^2 = .01$ , 95% CI [-0.02; .04],  $F(4, 124) = 0.28$ ,  $p > .05$ ). In the second step, adding job and personal resources added 16 percent of explained variance ( $p < .01$ ) and raised R square to .17 (CI [.06; .28],  $F(9, 124) = 3.79$ ,  $p < .01$ ). Motivation ( $\beta = .26$ ) and self-concept clarity ( $\beta = .22$ ) were positively linked to absorption.

All in all, the results of regression analyses partly support the hypotheses: when we included control variables, only one of the components of HPWP, namely, motivation, was significantly positively linked to all dimensions of work engagement. Thus, the first hypothesis is partially supported. Furthermore, there were no significant links between

mindfulness and the dimensions of work engagement, thus, hypothesis 2 was rejected. Finally, self-concept clarity was positively linked to dedication and absorption, thus the findings partially supported the third hypothesis.

## Discussion

Work engagement is one of the key determinants of person well-being at work (Bakker, 2011). A number of studies have proved its benefits both to companies and to employees (e.g., Lin et al, 2016; Demerouti et al., 2015; Harter et al., 2002). The aim of this study was to analyze whether work engagement is linked to three prominent organizational factors, namely, such perceived high performance work practices as motivation, ability, and opportunity, and two personal characteristics, i.e., mindfulness and self-concept clarity, that represent one's ability to understand oneself and be aware of one's inner and outer environment.

We expected that high performance work practices would be linked to work engagement. Though previously it has been suggested that the high performance practices yield best results when they are together (Kroon et al., 2013), the regression analysis in our study revealed that the only significant predictor of the dimensions of work engagement among job resources was motivation. The results suggest, that in our sample employees are more engaged when they feel that their company provides a motivating reward for their performance and offer career advancement. According to JD-R theory (Bakker & Demerouti, 2014), the motivational process occurs when job resources stimulate work engagement and this, in turn, leads to some desired

outcomes. Therefore, it is natural to assume, that motivational practices employed by the companies would contribute to this motivational process. However, surprisingly, in the current sample, abilities and opportunities were not linked to work engagement. Thus, it is possible, that those job characteristics that yield financial security are valued more and are more motivating to engage in one's work than abilities for growth or opportunities to work in teams and express opinion in company's strategic issues.

Secondly, we assumed that mindfulness would be linked to the dimensions of work engagement. Contrary to what we expected, mindfulness was not a significant predictor of work engagement. There might be several possible explanations, why work engagement was not linked to mindfulness in regression analysis. First of all, some unobserved factors might mediate or moderate the relationship (such as job characteristics, personality traits, etc.) between the variables. For example, in the study of Leroy et al. (2013) the link between mindfulness and engagement was mediated by authentic functioning. Also, it is possible that more mindful employees might be engaged to work that much because they are more prone to ask themselves, what the meaning of the work they are doing is. In addition, the employee's attitudes to work might play an important role: for example, if the work does not meet the expectations of the individual, becoming mindfully aware of one's negative feelings about one's work might yield anxiety. Given that not all individuals benefit from mindfulness and some even suffer adverse effects from mindfulness practices (Farias & Wikholm, 2016; Dobkin, Irving, & Amar, 2012), working in "autopilot" mode may in some cases be more adaptive if the reality is too harsh. Hence, these are the issues to be explored in future studies. Finally, it has been previously stated that self-concept clarity is an important element of employees' abilities to adapt in contemporary labor market (Hirschi, 2012), which stimulates optimal psychological functioning (Ritchie et al., 2011; Lewandowski et al., 2010; Lewandowski & Nardone, 2012). The findings of our study at least partially support this notion, as the regression analysis revealed that employees' self-concept clarity is related to dedication and absorption. Thus, employees, that have a consistent understanding of who they are and what characteristics they possess might be more dedicated and absorbed in their work tasks. Given that self-concept clarity is a stable characteristic that does not fluctuate much in time (Campbell et al., 1996) and helps to manage the interaction between the inner self and the environment (Lewandowski et al., 2012), it is possible, that those, who have higher self-concept clarity are more prone to find themselves in environments that suit them better and, therefore, be more immersed and absorbed in working tasks, as those tasks might be close to the true self.

To summarize, a variety of important predictors of work engagement have been investigated in previous studies (Chaudhary et al., 2012; Bakker & Demerouti, 2016). However, to date, only a few studies have outlined the significance of high performance work practices, employees' mindfulness, and self-concept clarity for employee's work engagement. Thus, our study contributes to previous findings by showing that of those three

resources, self-concept clarity and motivation seems to be the most important for employee's work engagement.

### Limitations and future directions

Although the findings of the current study have provided some new insights into the links between work engagement and its possible antecedents, this research has several limitations. First of all, the sample was fairly small. However, despite its size, the sample contained employees from a large variety of companies, providing with data from a heterogeneous group of people and giving more generalizability of our results than a more homogenous sample from fewer companies would. Nonetheless, future studies should try to replicate results with greater samples.

In addition, the study has been performed with an online questionnaire, which might have some sampling issues (e.g., not all possible study participants can be accessed through the internet; invitations to participate might get lost in spam filters; etc.). On the other hand, online surveys allow researchers to reach potential participants in a short amount of time (Wright, 2005) and access perspective participants from a wider range of geographical areas, in comparison with traditional data collection methods (O'Neill, 2004).

Moreover, this study has the limitation of adopting a cross-sectional design. Possible resources might change over time and there is a possibility of reciprocity between various resources (Hobfoll, 2012). Also, there is evidence that work engagement itself might play an important role in acquiring and fostering job and personal resources (e.g., Xanthopoulou et al., 2009). Thus, in subsequent studies, a longitudinal approach would be beneficial for understanding how self-concept clarity, mindfulness and HPWP change and develop over time, and how that affects work engagement. Also, an experimental approach could give evidence of causality between variables.

Finally, our study excludes possible job demands. As the Job Demands-Resources model (Bakker & Demerouti, 2007) implies, including job demands into future studies might give a better understanding of how human resource practices and personal resources interplay with demands. In addition, most recently scholars have drawn their focus from work engagement as a positive outcome to other significant aspects of the construct, e.g., investigating engagement as a mediator between personal resources and turnover intentions (Shahpouri, Namdari, & Abedi, 2016) or meaningful work and organizational commitment (Jung, & Yoon, 2016). Thus, including work engagement as a mediator among other study variables might yield some interesting findings.

### Conclusions and implications

The results of the study reveal positive links between work engagement and self-concept clarity. In addition, among the perceived presence and intensity of high performance work practices that organizations employ, motivation was linked to work engagement. These findings yield several implications for company managing parties. First of all, in order to encourage employees' work engagement, human resources management could employ aspects of high performance, especially by providing

employees with adequate salary and career opportunities. Moreover, companies could consider recruiting employees with higher levels of personal resources and supporting the development of these resources through training. For example, self-concept clarity can be raised through group psychotherapy (Styla, 2015). If self-concept clarity can

contribute to the motivational process of employees, which occurs when personal resources facilitate work engagement and, in turn, work engagement facilitates well-being and performance (Bakker & Demerouti, 2014), this might be beneficial both to individuals and employees.

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