

Recovery Experiences and Work Engagement – The Role of Emotions at Work*

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The need for positive organizational behavior research has resulted in the popularization of the concept of work engagement. Many researchers have examined its proximal antecedents, but little scientific attention has been focused on emotions and the non-work domain of employees' lives. Thus, the aim of this research was to study the relationship between recovery experiences, job-related affective well-being, and work engagement. A total of 279 Croatian employees participated in an online study. They filled in Job Affective Well-Being Scale, Recovery Experiences Questionnaire, short Utrecht Work Engagement Scale, and a demographic questionnaire. The results demonstrated that recovery strategies and positive workplace emotions explained 63,4% variance of work engagement. Positive emotions mediated the relationship between recovery experiences and work engagement when recovery was measured as relaxation, developing mastery experiences, and high control over leisure time. Negative emotions mediated only relationship between relaxation and work engagement. Altogether, this study expands previous knowledge and confirms the interaction between employees' work and non-work domains of life.

Keywords: positive organizational behavior, work engagement, work recovery, emotions at work, occupational health psychology

Highlights:

- Recovery strategies and positive work-related emotions together explained 63.4% variance of work engagement.
- All recovery strategies, except for psychological detachment, had an effect on work engagement through positive work-related emotions.
- Mastery was the only recovery strategy that had a clear indirect and direct effect on work engagement.
- This study extends previous research in occupational health psychology and motivates further studies, especially across other continents.

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In recent decades, the interaction between positive and organizational psychology has improved the understanding of various constructs in a working environment. One of the most discussed is work engagement, defined as “a positive and fulfilling work-related state of mind” (Schaufeli et al., 2002, p. 74). It goes along with feelings of vigor, dedication, and absorption in one’s work (Schaufeli et al., 2002) where vigor implies high levels of energy and mental resilience while working, dedication means being strongly involved in one’s work and having a sense of significance and challenge, while absorption refers to a full concentration in one’s work (Schaufeli et al., 2002).

Employees who experience those positive states are proactive, flexible, and goal-orientated (Bakker & Demerouti, 2008). They feel strong organizational commitment (Bakker et al., 2003), show high levels of energy and self-efficacy (Girveld & Van Rijswijk, 2006, as cited by Bakker & Demerouti, 2008; Schaufeli et al., 2001, as cited by Bakker & Demerouti, 2008), and are willing to go “the extra mile” (Bakke et al., 2004).

Since work engagement has a positive impact on individual and organizational outcomes, researchers (Bakker & Demerouti, 2007; Bakker et al., 2003; Schaufeli & Salanova, 2007; Tadić Vujčić, 2019; Xanthopoulou et al., 2007) were motivated to identify its contributing factors. As important job resources they identified autonomy, social support, performance feedback, and coaching (Bakker & Demerouti, 2008). They also found that personal resources such as optimism, general, and organizational-based self-esteem (Xanthopoulou et al., 2007), and resilience (Bakker et al., 2006, as cited by Bakker & Demerouti, 2008) contribute to work engagement. It was also concluded that personal resources could contribute to work engagement through the enrichment of structural and social resources (Tadić Vujčić, 2019).

In addition to job and personal resources, it is justified to say that work-related emotions are important for work engagement since they lead to evaluation of work context, enhance employees’ expectations (Weiss & Cropanzano, 1996), and influence work behavior (Spector & Fox, 2005). According to the *Broaden-and-Build Theory* (Fredrickson, 1998; Fredrickson, 2001; Fredrickson, 2004), positive emotions can broaden individuals’ thought-action repertoire and help individuals to build personal resources over time by “stimulating upward spirals of emotional well-being” (Fredrickson & Joiner, 2002, as cited by Demerouti et al., 2012, p. 278). They foster the desire to learn, explore, and search for areas for further improvement (Fredrickson, 2004). Thus, they can be understood as an individual-level factors that benefit work engagement (Salanova et al., 2010), either directly (Schaufeli & Van Rhenen, 2006), or indirectly via personal resources (Avey et al., 2008; Ouwenel et al., 2011; Ouwenel et al., 2012). The recent longitudinal studies (Burić & Macuka, 2018; Salanova et al., 2011) demonstrated reciprocal relationship between positive emotions and work engagement, while other research (e.g., Gloria & Steinhart, 2016) demonstrated that positive emotions can have a mediating role between job resources and work engagement. Some researchers (e.g., Hu & Kaplan, 2015) have focused on analyzing discrete emotions in the workplace and concluded that interest

stimulates exploration and learning, while pride is beneficial for self-efficiency which could be seen as an important personal resource. Additionally, it was found that enthusiasm, as a high activation positive emotion, has a strong effect on activity work engagement (Salanova et al., 2011). Thus, it is justified to say that positive emotions are the motivational force that stimulates positive states, attitudes, and behaviors in the workplace (Schaufeli & Van Rhenen, 2006). Furthermore, positive emotions also have “undoing effect on negative emotions” (Fredrickson, 2000, p. 1), which are connected to stress and negative workplace outcomes such as sickness, absence (Meijman & Mulder, 1998), and other forms of counterproductive work behavior (Spector & Fox, 2005; Spector & Goh, 2001).

Emotions are certainly influenced by the events that occur while working (Weiss & Cropanzano, 1996), but since work and non-work domains of employees' lives are in close interaction (Eden, 2001; Heller & Watson, 2005, as cited by Sonnentag et al., 2008), it seems work-related emotions could also be connected to recovery activities employees pursue in their leisure time (Sonnentag et al., 2008).

According to the *Effort-Recovery Model* (Meijmar & Mulder, 1998), putting energy in working tasks leads to specific load reactions in an individual, which include psychological, behavioral, and subjective responses. Since they are indicators of resource loss (Meijmar & Mulder, 1998) and people try to obtain, return, and protect them (Hobfoll, 1998), time off work allows them to recuperate from the investment during a workday or even build up new resources (Sonnentag, 2001; Sonnentag & Fritz, 2007). Thus, to “recharge their batteries” (Zijlstra & Sonnentag, 2006, p. 130) and to be ready for new work challenges, employees should pursue activities that do not put the same demands on their psycho-biological systems as work (Meijman & Mulder, 1998). These activities are, therefore, called below-baseline activities (Sonnentag, 2001) and, according to Sonnentag & Fritz (2007), can be understood as recovery experiences. They are comparable with affect-regulation strategies (Parkinson & Totterdell, 1999, as cited by Sonnentag & Fritz, 2007) and comprise mechanisms such as psychological detachment from work, relaxation, experiences of mastery and control over leisure time (Sonnentag & Fritz, 2007; Sonnentag et al., 2008).

Specifically, Sonnentag & Fritz (2007) argue that psychological detachment occurs when people can mentally disengage from job-related activities (by avoiding work-related tasks such as reading and responding to e-mails, etc.) and have a feeling of being disconnected from work. Thus, it is conceptualized as a mental disengagement from job-related activities and goes above pure physical absence from workplace during off-job time and abstaining from work tasks. Empirical evidence shows that psychological detachment is negatively related to depressive symptoms, health complaints, sleep problems (Sonnentag & Fritz, 2007), and a high need for recovery (Siltaloppi et al., 2009). It is connected to the positive mood, low fatigue at bedtime (Sonnentag & Bayer, 2005), and has a predictive value for the morning negative activation (Sonnentag et al., 2008). Also, it was found that psychological detachment predicts positive work-related

emotions (Nezirević et al., 2017) and has a direct link to occupational well-being (Siltaloppi et al., 2009).

During their leisure time, employees can also recover by relaxing (Sonnentag, 2001). Relaxation can be a result of deliberately chosen activities aiming to relax body and mind, such as mediation, or achieved by engaging in low activation activities such as book reading or taking a walk (Siltaloppi et al., 2009; Sonnentag, 2001). These activities do not require any social, physical nor intellectual effort (Sonnentag & Fitz, 2007) but are effective on the mental and physical level (Sonnentag et al., 2008). For example, it was found that relaxation is negatively related to emotional exhaustion (Sonnentag & Fritz, 2007), positively related to morning serenity (Sonnentag et al., 2008), and relevant for predicting positive emotions at work (Nezirević et al., 2017).

Mastery experiences imply using the off-the-job time to engage in challenging activities and represent learning opportunities in areas outside professional interest (Sonnentag & Fritz, 2007). Such activities (e.g., having a hobby or attending a workshop) “may put extra demands on individual” (Siltaloppi et al., 2009, p. 333) and require a certain degree of self-regulation (Sonnentag & Fritz, 2007) but offer an opportunity to gain new internal resources such as skills and competencies (Hobfoll, 1998; Sonnentag & Fritz, 2007). Up to this date, studies have shown that practicing mastery during a vacation is related to lower levels of exhaustion while returning to the job (Fritz & Sonnentag, 2006). It is negatively related to depressive symptoms, emotional exhaustion, need for recovery (Sonnentag & Fritz, 2007), and positively associated with the work engagement (Siltaloppi et al., 2009) and positive activation in the morning, before the working day (Sonnentag et al., 2008).

Lastly, control over leisure time is defined as the ability to choose activities in which to involve and when. It stimulates self-efficacy, positive feelings, recovery from job strain (Sonnentag & Fritz, 2007), and is shown to be important for work-related affective well-being (e.g., Nezirević et al., 2017).

Altogether, it seems that data support the theoretical discussion about the importance of work recovery. Because the effects of recovery experiences are present before going to work, and daily level of work recovery is beneficial for work engagement (Kühnel et al., 2012; Sonnentag, 2003; Sonnentag et al., 2012), it seems that practicing them could easily spill over into work domain and have an important role for work-related well-being (Siltaloppi et al., 2009).

The Present Study

To better understand work engagement, many researchers have examined personal and job factors as its predictors, but more scientific attention could be focused on emotions and the non-work domain of employees' lives, especially in terms of work recovery experiences. In addition to its clear scientific contribution to the workplace stress literature, work recovery has a respectable potential in both work efficiency and stress management praxis. Thus, going one step further, the aim of this research was to study the relationship between recovery experiences, job-related affective well-being, and work engagement.

Based on the review of the literature (Kühnel et al., 2012; Nezirević et al., 2017; Siltaloppi et al., 2009; Sonnentag, 2003; Sonnentag et al., 2008; Sonnentag et al., 2012; Sonnentag & Bayer, 2005), we assumed the following:

Hypothesis 1: All recovery experiences (i.e., psychological detachment, relaxation, mastery experiences, and control over leisure time) will positively correlate with work engagement.

Hypothesis 2: The relationship between recovery experiences and work engagement will be partially mediated by positive emotions. We expect all the constructs to be positively correlated.

Hypothesis 3: The relationship between recovery experiences and work engagement will be partially mediated by negative emotions. More precisely, negative emotions at work will be negatively related to both recovery experiences and work engagement.

Method

Participants

The convenience sample consisted of 279 employees from various Croatian companies. Participants were heterogeneous regarding their demographics, with an average age of 35.9 years ($SD = 11.79$), and 60.2 % of them being female. 54.6% of them worked in the private while 37.1% worked in the public sector with an average of 8.6 years ($SD = 9.05$) spent in the same organization. A quarter (27.1%) of participants worked at executive-level positions. 41.9% of employees had a high-school diploma as their highest level of education, while others had graduate or postgraduate educational degrees. Furthermore, most participants had fixed working hours, whereas 13.1% reported having flexible work schedules. On average, participants reported they worked 41 hours a week.

Measures

Work Engagement

A 9-item measure developed by Schaufeli et al. (2006) was used to measure three aspects of work engagement: vigor (sample item: "At my work I feel bursting with energy."), dedication (sample item: "I am enthusiastic about my job.") and absorption (sample item: "I get carried away when I am working."). Translation to Croatian language was based on back translation. Measure showed sound psychometric properties (Grđan et al., 2016). The participants gave their responses on a 7-point frequency scale, ranging from 0 = *never* to 6 = *always/every day*. Since there are empirically supported theoretical reasons for the high correlation between all three subscales (Schaufeli et al., 2003), it is justified to use an overall scale result. Higher score on the overall scale indicates the higher level of work engagement. The inter-correlations of subscales in this study ranged from .64 to .80, while the total scorescale demonstrated internal reliability of .91.

Job-Related Affective Well-Being

We used Job-Related Affective Well-Being scale (Van Katwyk et al., 2000) to investigate the positive (sample item: "My job made me feel energetic.") and negative work-related emotions (sample item: "My job made me feel anxious."). Translation of scale into

Croatian language was based on back translation procedure (Nezirević et al., 2015). Cronbach's alphas for positive and negative emotions scales were .91 and .95. The questionnaire consists of 20 items with a frequency scale 1 (never) to 5 (very often). Thus, higher score on each subscale indicates a frequent experience of either positive or negative emotions, associated with one's work in the last 30 days. In the present study, the positive and negative emotions scales showed Cronbach's Alphas of .93 and .89, respectively.

Recovery Experiences

To assess psychological detachment, relaxation, mastery experiences, and control during the off-job time, we used the Recovery Experience Questionnaire (Sonnentag & Fritz, 2007). Translation of scale into Croatian language was based on back translation method (Tonković Grabovac & Salkičević, 2013). Cronbach's alpha coefficients calculated on the Croatian sample ranged from 0.90 to 0.91. Participants responded on the 5-point Likert scales (1 = *fully disagree* to 5 = *fully agree*) to 16 items referring to experiences during their time off. Sample items were: "I distance myself from my work." (psychological detachment), "I do relax things." (relaxation), "I learn new things." (mastery experiences) and "I determine for myself how I will spend my time." (control). Thus, higher score on each subscale indicates the more frequent usage of specific recovery strategy. The overall scale Alpha reliability in this study was .90, which is in line with previous research (Sonntag & Fritz, 2007; Balducci et al., 2010). Subscales Cronbach's Alphas were: .87 for psychological detachment, .91 for relaxation, .87 for mastery experiences and .88 for control.

Demographic Questionnaire

The participants were asked about their educational degree, years of service in the current organization, work time schedules, and other aspects of their work and organization. They were also asked to give information about age, gender, and features of their family life.

Procedure

As part of a course assignment, psychology students at the University of Zagreb recruited participants based on the inclusion criteria of working at least 30 hours a week. Participation in this study was voluntary and anonymous and did not endanger participants' well-being. However, participants were encouraged to contact both researchers and University's ethical board, in case of any discomfort.

Participants were asked to fill in the online questionnaires asking about their reactions to their work-life. Together with the measures described above, participants also filled in some additional questionnaires since the study was a part of larger data collection, i.e. project supported by University of Zagreb. After data gathering, we conducted correlation and regression analyses. In addition, we performed bootstrap analysis of the magnitude and statistical significance of serial indirect effect to gain deeper insight in the interaction between recovery strategies, job-related affective well-being, and work engagement.

Results

Descriptive Statistics

Descriptive statistics and inter-correlations between study variables are presented in Table 1. The results of the JAWS scale showed that participants, in general, agreed with items related to frequent experiencing of positive work-related emotions more than with ones related to negative work-related emotions.

Obtained responses covered almost the whole range of subscales. The practice of recovery experiences was reported to be above the central point of the theoretical range of scales. Mean values for each subscale suggested that participants agreed the least with items related to using the strategy of psychological detachment. These findings are generally in line with a previous study on a Croatian sample that used the same measures of emotions and work recovery (Nezirević et al., 2017). Finally, self-reports of work engagement ranged from the lowest to the highest scale values, with an average result slightly above the central point of the scale.

To examine relationships between recovery experiences, emotions, and work engagement, we used correlation analysis, i.e. Person's correlation coefficients. Focusing on results presented in Table 1, we can see that recovery experiences were negatively connected to negative work-related emotions and positively connected to positive work-related emotions, apart from psychological detachment, which showed zero correlation with positive emotions. The pattern and size of correlation coefficients were largely similar to previous findings on the previously mentioned Croatian sample (Nezirević et al., 2017). Considering all recovery experiences, both groups of emotions were most strongly connected to recovery experiences of mastery and control. All recovery experiences were significantly related to work engagement: relaxation, experiences of mastery and control positively, while the psychological detachment correlated negatively but with a low effect size. Out of all recovery strategies, experiences of mastery had the highest correlation with work engagement. However, in the study variables matrix, the highest positive relationship was between positive work-related emotions and work engagement, while negative work-related emotions, as expected, showed a lower and negative relationship with work engagement.

Table 1
Descriptive Data and Inter-correlations between Study Variables (N = 279)

	1.	2.	3.	4.	5.	6.	7.
Positive emotions	1	-.478**	-.116	.198**	.348**	.268**	.782**
Negative emotions		1	-.118*	-.226**	-.277**	-.277**	-.433**
Psychological detachment			1	.575**	.098	.375**	-.133*
Relaxation				1	.347**	.567**	.158**
Experiences of mastery					1	.378**	.406**
Control						1	.279**
Work engagement							1
M	29.00	22.32	11.43	14.95	14.50	14.69	30.56
SD	7.77	6.68	4.46	3.78	3.62	3.75	10.86
Min – Max	11 – 48	10 – 45	4 – 20	4 – 20	4 – 20	4 – 20	0 – 53

Note. * $p < .05$; ** $p < .01$.

Relative Contribution of Recovery Experiences and Work-Related Emotions in Predicting Work Engagement

A hierarchical regression analysis (see Table 2) was performed to test how well work recovery strategies and emotions predict work engagement. Recovery experiences were introduced in the first step of the analysis and alone explained 23.5% variance of work engagement, but not all of them were statistically significant predictors. Specifically, relaxation did not explain any variance of work engagement, whereas mastery seemed to be the best predictor. Additionally, psychological detachment was a significant, but negative predictor of work engagement. When positive and negative work-related emotions were added in the regression analysis, all recovery experiences, except for experiences of mastery, lost their significance in predicting work engagement. Due to their high inter-correlation (see Table 1), positive work-related emotions explained most of the variance of work engagement, whereas negative work-related emotions were not a significant predictor in this combination. Despite the high correlation between positive work-related emotions and work engagement, and the high percentage of explained variance of work engagement over the recovery experiences, experiences of mastery remained a significant predictor in the second step, which suggests it might have a direct effect on work engagement. Altogether, work recovery strategies and work-related emotions explained 63.4% variance of work engagement.

Table 2
Hierarchical Regression Analysis Predicting Work Engagement (N = 279)

Predictors	Work Engagement	
	Standardized Coefficients (β)	
	Step 1	Step 2
Psychological detachment	-.299**	-.083
Relaxation	.096	-.038
Experiences of mastery	.322**	.146**
Control	.216**	.078
Positive emotions		.674**
Negative emotions		-.068
R	.496**	.801**
R ² _{adj.}	.235**	.634**
ΔR		.396**

Note. ** $p < .01$.

Direct and Indirect Effects of Work Recovery Experiences on Work Engagement

By using Hayes process in SPSS, we performed a bootstrap analysis of magnitude and statistical significance of the serial indirect effect that work

recovery strategies have on work engagement through work-related emotions. We conducted this analysis for both positive and negative work-related emotions, separately.

Table 3

Results of Bootstrap Analysis of Magnitude and Statistical Significance of Serial Indirect Effect of Work Recovery Strategies Through Positive Emotions on Work Engagement (N = 279)

Model	B	SE	BCa 95% CI	BCa 95% CI
			lower	upper
1. Psychological detachment	-0.22	0.12	-0.4552	0.0188
2. Relaxation	0.44	0.15	0.1558	0.7494
3. Experiences of mastery	0.76	0.13	0.5080	1.0202
4. Control	0.59	0.15	0.2947	0.8839

Note. BCa – bias-corrected and accelerated. Confidence intervals (CI) that do not contain a zero indicate significant indirect effect, and they are printed in **bold**.

Figure 1 and Table 3 show results of analyses when positive work-related emotions were tested as a mediator. As it can be seen in Figure 1, the direct effect of work recovery experiences on work engagement was significant only in the case of experiences of mastery ($t = 3.93, p < .001$), but this work recovery strategy also showed a significant indirect effect on work engagement through positive work-related emotions. It means that experiencing mastery in leisure time predicts higher work engagement directly, but this effect is also achieved by fostering positive work-related emotions. Relaxation and control showed a significant indirect effect on work engagement only through positive work-related emotions, whereas psychological detachment had neither an indirect nor a direct effect on work engagement. Altogether these findings indicated that majority of recovery strategies effect the work engagement through positive work-related emotions, while only experiences of mastery have an additional direct effect on work engagement.

Table 4

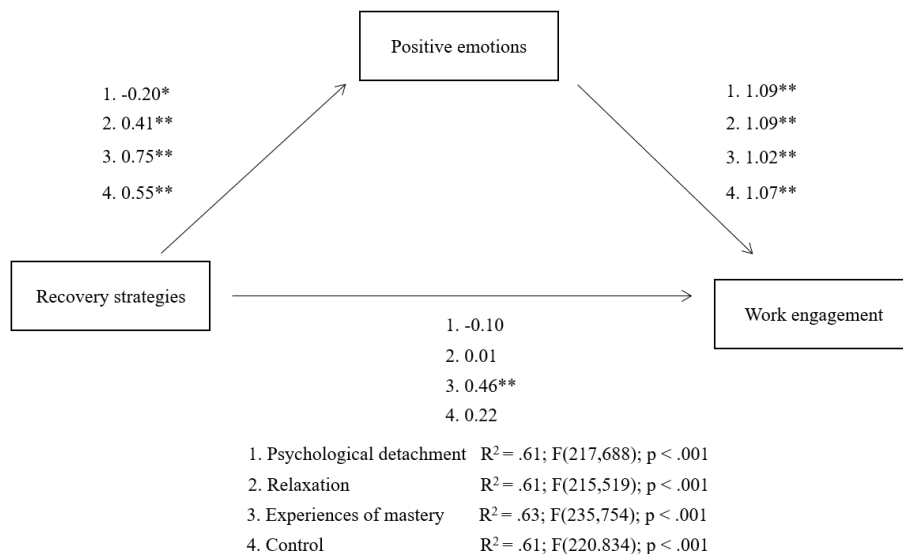
Results of Bootstrap Analysis of Magnitude and Statistical Significance of Serial Indirect Effect of Work Recovery Strategies Through Negative Emotions on Work Engagement (N = 279)

Model	B	SE	BCa 95% CI	BCa 95% CI
			lower	upper
1. Psychological detachment	0.13	0.07	-0.0008	0.2784
2. Relaxation	0.78	0.10	0.1118	0.4863
3. Experiences of mastery	0.29	0.08	0.1484	0.4541
4. Control	0.31	0.09	0.1511	0.4984

Note. BCa – bias-corrected and accelerated. Confidence intervals (CI) that do not contain a zero indicate significant indirect effect, and they are printed in **bold**.

Figure 1

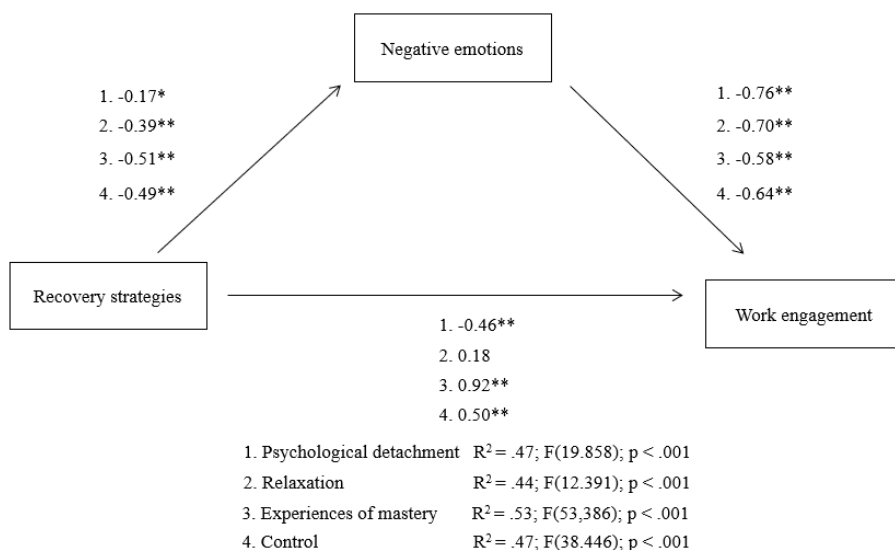
The model of relationships between work recovery experiences (psychological detachment, relaxation, experiences of mastery, control), work-related positive emotions and work engagement



The results of a bootstrap analysis of magnitude and statistical significance of the serial indirect effect of work recovery strategies on work engagement through negative work-related emotions are summarized in Figure 2 and Table 4. Negative work-related emotions (fully) mediated only a relationship between relaxation and work engagement, while the other three recovery experiences in this constellation showed a significant direct effect on work engagement.

Figure 2

The model of relationships between work recovery experiences (psychological detachment, relaxation, experiences of mastery, control), work-related negative emotions and work engagement



Discussion

This study was conducted to investigate the relationship between work recovery experiences, work-related emotions, and work engagement. In the case of positive work-related emotions, we proposed a positive relationship between all psychological constructs and hypothesized that work recovery experiences would indirectly affect work engagement through positive work-related emotions. We expected negative work-related emotions to mediate the relationship by having negative correlations with both work recovery experiences and work engagement. Presented results were largely in line with our expectations for positive emotions, but more as an exception for the mediating role of negative emotions.

The results of regression analyses supported Hypothesis 1, showing that employees' recovery experiences explained a significant proportion of their work engagement. In line with the research of Siltaloppi et al. (2009), mastery and control, as active work recovery strategies (Sonnetag & Fritz, 2007), were most significantly related to the criteria. However, contrary to our expectations and results of previous research (Siltaloppi et al., 2009) the psychological detachment was negatively related to work engagement. Altogether, psychological detachment, mastery experiences, and control over leisure time explained 23% variance of the criterion and this proportion of explained variance is higher than the proportion obtained in the previous study (Siltaloppi et al.,

2009). The confirmed significant role of work recovery was also in line with the findings of diary studies (Kühnel et al., 2012; Sonnentag, 2003; Sonnentag et al., 2012), and the assumption that recovery experiences are not only important for stress reduction (Sonnentag & Fritz, 2007) but also for the stimulation of (pro) active work approach (Siltaloppi et al., 2009; Sonnentag, 2003). The result that psychological detachment negatively predicted work engagement could probably be attributed to its (moderately) high correlation to relaxation and control (Table 1). Specifically, in regression analysis, psychological detachment seemed to have had a suppression role by increasing the percentage of explained variance of work engagement through its connection to other work recovery strategies (see Table 2).

Furthermore, with Hypotheses 2 and 3, it was expected that work-related emotions would have a mediating role in the relationship between recovery and work engagement. Hypotheses were tested by two analytic methods: hierarchical regression analysis and bootstrap analysis of the magnitude and statistical significance of the serial indirect effect. When introduced in regression analysis, positive work-related emotions showed to be a better predictor of work engagement than work recovery experiences. This strong connection between positive work-related emotions and work engagement is in line with previous studies (Balducci et al., 2010; Ouwenel et al., 2012) and can be explained by the nature of work engagement and its definition as a positive work state characterized by high energy and identification with work (Schaufeli & Bakker, 2004). Contrarily, negative work-related emotions consider lack in work engagement. . Nevertheless, when put together in a multiple regression analysis, negative work-related emotions did not show any additional value in predicting work engagement over recovery strategies and this can likely be attributed to a high correlation between positive work-related emotions and work engagement (see Table 1).

Despite their stable inter-correlation, previous studies found that positive and negative affective systems are related to distinctive psychological processes (Cacioppo & Gardner, 1999; Schaufeli & Van Rhenen, 2006; Sonnentag et al., 2008). While “positive emotions broaden people’s momentary thought-action repertoires” (Fredrickson, 2004, pp. 1369) and make them more willing to invest their energy in working tasks (Fredrickson, 2004), negative emotions play a central role in the stress process that may lead to burnout and health complaints (Schaufeli & Van Rhenen, 2006; Spector & Goh, 2001). Thus, as an additional test of Hypotheses 2 and 3, we conducted mediator analyses on both positive and negative work-related emotions, separately. The results showed that all recovery experiences, apart from psychology detachment, have an indirect effect on work engagement through positive work-related emotions. This highlights the importance of positive emotions at work, as mediators of personal variables, such as recovery strategies and work engagement. The result that psychological detachment had no indirect effect on work engagement through emotions indicates that it might be (negatively) related to work engagement through mechanisms that are not affective in their nature.

Additionally, the results of the mediation analysis emphasize the importance of mastery as a recovery strategy. Specifically, experiences of mastery turned out to be the only strategy that had a clear indirect and direct effect on work engagement. This result is consistent with hierarchical regression analysis (see Table 2) in which experiences of mastery remained a significant predictor of work engagement even after we introduced work-related emotions. This could be attributed to the fact that, contrary to other recovery activities, mastery experiences ask for a certain amount of time and energy investment but provide significant resource gain (Sonnentag & Fritz, 2007). When employees have recovered by practicing activities directed at self-development, they seem to be more willing to accept challenging work situations (Siltaloppi et al., 2009) and dedicate themselves to tasks they are given. Therefore, it is appropriate to conclude that active recovery approach could be easily translated to an active work-related state of mind and that mastery experiences do not only have an affective valence, like other recovery strategies, but are also cognitive in nature (Schaufeli & Bakker, 2004). This might clarify our finding that mastery experiences explained a part of the variance of work engagement that is unrelated to emotions.

In the case of negative work-related emotions, the mediation role was pronounced less than for positive work-related emotions, as most recovery experiences also showed a direct effect on work engagement. Work recovery experiences were, as expected, negatively correlated to negative emotions, since they help employees to recuperate from demanding job situations and prepare for future challenges (Sonnentag & Fritz, 2007). However, negative work-related emotions did not show a highlighted role in the relationship between recovery and work engagement. This result could be explained by the fact that they are considered important factors of the work-stress process (Spector & Goh, 2001). Results of this study indicate that a lack of negative work-related emotions is beneficial for positive work states, but positive work-related emotions have a far more important role in the motivational process and consequently in the relationship between work recovery experiences and work engagement.

Limitations, Conclusion, and Suggestions for Future Research

When interpreting the results of the present study, we should have in mind its limitations. The main limitation refers to a cross-sectional design of the study, which does not justify the causal interpretation of the relationship between the constructs. Hence, the indications about the direction of the effects are just the first step in the causal validation of the findings.

Moreover, the examined sample has been gathered by the nonprobability technique, and we assessed our data online and with self-report measures. Such sampling and methods of research may result in the reduction of variability, especially for the work engagement variable. It is possible that the research involved respondents who were generally more motivated and had a higher level of work engagement. Hence, the effect of the obtained relationships might be underestimated.

Referring to the study sample, it should be noted that it mostly covered employees with the high-school diploma. Also, presented results could only be generalized on populations of European employees due to wide variance in the amount of vacation time given across continents and the differential focus placed on leisure in some regions vs. others.

Furthermore, Sonnentag & Fritz (2007, p. 218) noted that “someone may argue that four recovery experiences might not comprise all potentially relevant recovery activities”. Thus, we encourage future researchers, both qualitative and quantitative, to examine other recovery experiences and their potential to reduce work-related stress and affect other work-related behavior.

Additionally, in diary studies, which has been the most common research design in work recovery research so far, the constructs were considered as states, i.e. to have an intra individual variation and fluctuation from one day to another (e.g., Breevaart et al., 2012). Using episodic types of assessment, researchers can “capture the subtle fluctuations in the workplace conditions and employees” affective and motivational states and discover more proximal determinants of work-related well-being” (Tadić Vujčić, 2014, p. 11). Even though our study does not provide an insight into the dynamic between studied constructs, it is a valuable contribution to the literature on trait work engagement and trait work recovery. To the best of our knowledge, there are few studies that linked these two constructs on the trait/habit level (Siltaloppi et al., 2009), with this study being the first that examined the mediating role of emotions. Also, differently from studies (Kühnel et al., 2012; Sonnentag, 2003; Sonnentag et al., 2012) that were focused on the global level of recovery or the need for recovery (Sonnentag & Zijlstra, 2006), present study reveals which work recovery strategies are particularly beneficial for work-related well-being. Thus, even though our study has its limitations, it represents the extension of previous research in occupational health psychology and provides the motivation for further studies.

From a practical point of view, it should be noted that work recovery experiences are malleable and can be deliberately promoted (e.g., through a training interventions; Hahn et al., 2011). Therefore, organizations should stimulate their employees to efficiently recover from energy-costing work situations, even when they are not confronted with intensive work stress. They could encourage that explicitly by raising the awareness of importance of work-recovery for personal and professional well-being. Specifically, organizations could organize educations about the importance of work recovery or workshops on the topic of work-related well-being. Implicitly, importance of recovering from work activities could be implemented in different organizational policies, procedures, and activities. For example, organizations could finance sports and other non-work-related activities, create more flexible work schedules, support the culture of not receiving work-related calls, reading, and responding to work-related mails during off job time, etc. HR could also consider designing other mechanisms for prevention of work overload and burnout and introduce metrics for detecting the quality of balance between work and private life.

To conclude, by now, many researchers have explored proximal antecedents of work engagement while less attention was directed on distal ones. This study tries to fill that gap and is innovative since it focused on positive work-related emotions as a mediator between work recovery and work engagement. So far, and to our knowledge, those constructs work recovery and work engagement have not been combined into one conceptual model. Thus, our results could serve as motivation for future research, especially across other continents. By raising the complexity in the research design, future studies could also focus on exploring potential gain cycles, gain spirals, and positive reciprocal relationships among work recovery, work related emotions, and work engagement.

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Iskustva oporavka i angažovanost na poslu – uloga emocija na poslu

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Potreba za istraživanjem pozitivnog organizacionog ponašanja je koncept angažovanosti na poslu (eng. work engagement) učinila vrlo popularnim. Mnogi istraživači su ispitivali njegove proksimalne antecedente ali je malo naučne pažnje posvećeno emocijama i aspektima života zaposlenih van posla. Shodno tome, glavni cilj ovog istraživanja je da se ispita veza između iskustava oporavka, subjektivnog blagostanja u vezi s poslom, i angažovanosti na poslu. Ukupno 279 zaposlenih iz Hrvatske je učestvovalo u online studiji. Popunjavali su skalu subjektivnog blagostanja na poslu (eng. Job Affective Well-Being Scale), upitnik o iskustvima oporavka (eng. Recovery Experiences Questionnaire), kratku Utreht-skalu angažovanosti na poslu (eng. short Utrecht Work Engagement Scale), i demografski upitnik. Rezultati su pokazali da su strategije oporavka i ugodne emocije vezane za posao objasnile 63.4% varijanse angažovanosti na poslu. Pozitivne emocije su se pokazale medijatorom u odnosu između iskustava oporavka i angažovanosti na poslu, onda kada je oporavak operacionalizovan kao relaksacija, razvoj iskustava ovladavanja (eng. developing mastery experiences) i visoka kontrola nad slobodnim vremenom. Neugodne emocije su bile medijator veze između relaksacije i angažovanosti na poslu. Sveukupno, ova studija proširuje prethodna znanja i potvrđuje interakciju između rada poslovnog domena i domena koji nisu deo posla u životu zaposlenih.

Ključne reči: pozitivno organizaciono ponašanje, angažovanost na poslu, oporavak od posla, emocije na poslu, psihologija zdravlja na radu

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