Master Thesis Human Resource Studies

The relation between job crafting dimensions seeking challenges and resources, and organizational citizenship behavior.

Exploring the role of mindfulness and work engagement

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Abstract

This research examined job crafting at the organization level and was conducted in collaboration with a course given at Tilburg University as a part of the Bachelor program Human Resource Studies. This study investigates the positive relation between mindfulness, job crafting, OCB, and the extent to which these relations are partially mediated by work engagement. Data was collected through distribution of questionnaires, the constructs were measured with existing scales. 405 employees filled in the questionnaire, with a response rate of 98.8%. A multiple regression analysis was performed to check whether the hypotheses were significant. A significant direct effect was found between both job crafting dimensions in relation to organizational citizenship behavior. In addition to this, the expected relation between the job crafting dimension seeking resources and organizational citizenship behavior, partially mediated by work engagement, was confirmed. Lastly, this study found a significant full mediation of work engagement in the relation between mindfulness and OCB.

Keywords: Job crafting, seeking challenges, seeking resources, work engagement, organizational citizenship behavior, mindfulness

Introduction

"An organization which depends solely upon its blue-prints of prescribed behavior is a very fragile social system" (p.132 Katz, 1964). Behavior which goes beyond formal job description is fundamental for an organization to function (Katz, 1964). Organizational citizenship behavior (OCB) is an example of such extra role behavior, which is not included in the formal job description but does contribute to organizational performance (MacKenzie, Podsakoff, & Fetter, 1991). As OCB is positively related to organizational performance, it is important to gain more knowledge of the antecedents of OCB.

A potential antecedent of OCB is job crafting. Job crafting refers to voluntary behavior which is focused on seeking resources and challenges as well as reducing demands, initiated by the employee and aimed at improving the job conditions (Petrou, Demerouti, & Schaufeli, 2015). Seeking challenges includes trying to obtain more responsibilities and reducing demands is aimed at decreasing the demand of mental, emotional or physical job aspects. An example of seeking resources is asking advice from the manager or coworkers (Petrou et al., 2015). The expected relation between job crafting dimensions seeking challenges and resources, and OCB is grounded in the conservation of resources (COR) theory (Hobfoll, 2002). The COR theory states that individuals strive to optimize their resources by acquiring or preserving resources. Acquiring resources can be done by investing resources in order to build further resources. Seeking challenges can be seen as an investment of resources which is expected to lead to resource gains and seeking resources is a way of acquiring resources (Dawson, O'Brien, & Beehr, 2015). Following this reasoning, we expect that employees who seek challenges and resources will have plentiful resources which they can invest in their job. Therefore they are likely to show behavior which is not included in the formal job description, and engage in OCB. Decreasing demands is excluded from this study, since it can be seen as a way to preserve ones resources and is therefore not expected to lead to investment of resources and OCB.

We propose that the expected relation between seeking challenges and resources, and OCB is mediated by work engagement. The concept of work engagement consists of the concepts dedication and vigor (Schaufeli & Bakker, 2004). This in line with a recent study from Demerouti, Bakker, and Gevers (2015a), who hypothesized this relation. The job demands-resources (JDR) model supports this relation (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). According to this model, job resources lead to work engagement, and in turn will result in higher OCB. Since

seeking challenges and resources is a way of obtaining job resources, it is likely that seeking challenges and seeking resources are positively related to work engagement. However, the JDR-model suggests that decreasing job demands will not result in higher work engagement (Bakker, Rodríguez-Muñoz, & Vergel, 2016). Therefore, this dimension is excluded from the study. Furthermore, another possible predictor of OCB is mindfulness. The concept of mindfulness involves the activities; awareness and attention (Brown, Ryan, & Creswell, 2007). Mindfulness can be categorized as a personal resource (Taylor & Millear, 2016). The JD-R model of work engagement argues that personal and job resources are related to work engagement which in their turn relates to OCB (Bakker & Demerouti, 2008). Based on this model we expect that mindfulness is positively related to OCB, mediated by work engagement.

This study is relevant for organizations, because mindfulness and job crafting can be stimulated by the organization. This can be done by implementing a job crafting intervention (Van den Heuvel, Demerouti & Peeters, 2015; Van Wingerden, Derks, & Bakker, 2015; Berg, Dutton, & Wrzesniewski, 2008) in order to support job crafting and give the employees tools to be more mindful (such as a mindfulness training, Hölzel et al., 2011). Additionally, OCB as work related outcome is interesting for organizations since it is a significant predictor of organizational performance (Podsakoff, Whiting, Podsakoff, & Blume, 2009). Moreover, this study contributes to scientific research about job crafting, by investigating mindfulness as potential antecedent of job crafting. Studies confirm the value and importance of future studies on the topic job crafting (Tims, Bakker, Derks, & Rhenen, 2013b) and clarifying personal antecedents of job crafting (Niessen, Weseler, & Kostova, 2016). This study tends to answer to the call for future research around job crafting with a sample consisting of a variety of job types (Appendix C) and organizational contexts (Lyons, 2008). Furthermore, Demerouti et al. (2015a) showed that it is promising to investigate more specific strategies used by employees, like types of job crafting, in relation to extra-role behavior. Therefore, it adds to the literature related to OCB by relating the concept job crafting and mindfulness with OCB. Lastly, this study adds to the existing literature of engagement, by seeking ways by which engagement contributes to performance. Rich, Lepine, and Crawford (2010) investigated antecedents and effects of engagement on performance and stress the importance of future studies which focus on other mechanisms by which engagement adds to performance. The aim of this paper is to explore how organizational citizenship behavior can be stimulated by the crafting of challenging demands and resources and if work engagement

and mindfulness play a role in this process. This leads to the following research question: *To what extent do mindfulness and job crafting dimensions seeking challenges and resources affect organizational citizenship behavior and to what extent is this relationship mediated by work engagement?* The structure of the theoretical framework is as follows: definitions, theoretical perspectives and empirical evidence supporting the relations between the variables in the conceptual model, concluding with the hypotheses.

Theoretical framework

Job crafting dimensions seeking challenges, seeking resources and OCB

Wrzesniewski and Dutton (2001) describe job crafting as either physical or cognitive self-initiated changes at work, concerning task or relational aspects. More specifically, job crafting consists of different job crafting forms, in the research field of job crafting many different types are used (Kooij, Tims, & Kanfer, 2015). For instance, according to Wrzesniewski and Dutton (2001) job crafting consists of three dimensions: task crafting, relational crafting and cognitive crafting. This categorization distinguishes the different dimensions according to changes in amount and content of tasks, interactions at work and point of view with regard to the job. These categorizations consider changes in tasks, relationships or cognitions. Nonetheless, in many cases employees craft their job without altering the tasks of their relationships. For instance, they develop their skills, obtain more autonomy or increase the level of difficulty in their job (Petrou et al., 2015). Therefore, we will use the definition from Petrou et al. (2015) in this study. According to Petrou et al. (2015), seeking challenges, seeking resources and reducing demands are the three dimensions which conceptualize job crafting. Seeking resources is help-seeking behavior, like asking feedback or advice at work. (Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012). An example of seeking challenges is looking for challenging job demands, like more responsibilities or extra tasks. Job demands are aspects of one's job which require continuous mental or physical effort (Demerouti et al., 2001). The job crafting dimension reducing demands is often used by employees to cope with a high workload (Petrou et al., 2015).

OCB can be described as behavior of the individual which is unrestricted, not included in the formal reward system and attributes to organizational performance (Organ, 1988; McKenzie, Podsakoff & Fetter, 1991). In addition to this, Organ (1997) specifies the distinction between OCB

and task performance. OCB is mainly regulated by someone's discretion and therefore, it will frequently rely on self-control (de Boer, van Hooft, & Bakker, 2015). Since job crafting is a self-initiated change and therefore a tool for self-control it is likely that job crafting and OCB are positively related. Moreover, OCB can also be seen as a type of job crafting. For instance, taking on extra work to help a project and establishing relationships with potential buyers can be defined as either OCB or job crafting (Wrzesniewski & Dutton, 2001). Yet, these two concepts are empirically distinct because they differ in scope (Wrzesniewski & Dutton, 2001). OCB is aimed at helping coworkers or the organization while the goal of job crafting is to reshape aspects of the job in order to improve job conditions (Petrou et al., 2015). Thus, only in some situations job crafting behavior has a positive effect on other elements in the organization or coworkers.

This linkage is grounded in the conservation of resources (COR) theory (Hobfoll, 1989). The COR theory is built around the assumption that an individual's goal is to optimize his resources by protecting and maximizing them. According to Demerouti et al. (2015a), extra-role behavior like OCB is related to the optimization of resources. By seeking challenges, the employee invests resources resulting in potential resource gain. Seeking resources is a way of acquiring new resources. For that reason, both job crafting dimensions can be seen as a way of managing one's resources, therefore it is likely that seeking challenges and seeking resources will influence OCB. Decreasing demands can be seen as a way to protect one's resources, these employees are not expected to invest resources in their job and are not likely to show OCB. Thus, the job crafting dimension decreasing hindering job demands is not included in this research, we will only focus on seeking challenging demands and seeking job resources.

Increasing resources and increasing challenges were found to be related to performance (Tims, Bakker, & Derks, 2012). Concluding, by building on the COR theory (Hobfoll, 1989) it is expected that seeking challenges and seeking resources will result in higher levels of OCB. Thus, it is hypothesized that:

H1. Seeking challenges (1a) and seeking job resources (1b) are positively related to organizational citizenship behavior.

The mediation of work engagement in the link between job crafting dimensions seeking challenges, seeking resources and OCB

Work engagement can be defined as a positive work-related state and is categorized into vigor, dedication and absorption (Schaufeli, Salanova, Gonzalez-Roma´, & Bakker, 2002). However, it is suggested that vigor and dedication are the core components of work engagement (Schaufeli & Bakker, 2014). It has been argued that absorption differentiates from the other components, since it plays a different role (De Beer, Tims, & Bakker, 2016) and is implied to be related to another concept (Schaufeli, Bakker, & van Rhenen, 2009). Therefore, we will focus on the concepts vigor and dedication as core components of work engagement in this study. Vigor involves high energy levels, mental resilience, persistence and eagerness to invest effort in ones work, while dedication is merely concerned with involvement in someone's work and positive feelings (Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002). It is expected that work engagement mediates the relation between job crafting and OCB. However, Tims, Bakker, and Derks (2013a) found that one dimension of job crafting, namely reducing demands was not related to work engagement. Therefore it is less likely that reducing demands is related to OCB through work engagement. For that reason, the focus of the link between job crafting and OCB will be on two dimensions of job crafting: seeking challenges and seeking resources.

The relation between seeking challenges, seeking resources, engagement and OCB is grounded in two theories, namely the conservation of resources (COR) theory (Hobfoll, 1989) and the JDR-model of work engagement (Bakker & Demerouti, 2008), whereas the JDR-model acts a framework for engagement and the COR theory provides further information (Robins, Roberts, & Sarris, 2015). Seeking challenges and resources can be used as a tool to obtain job resources (Tims & Bakker, 2010). The JDR-model of work engagement (Demerouti et al., 2001) states that job resources lead to work engagement, which in turn leads to different types of performance, e.g. OCB. For instance, job resources are useful in achieving goals at work or can stimulate personal growth and development (Demerouti et al., 2001). This can be related to seeking challenges and resources, whereas seeking challenges is expected to stimulate personal growth and development by mastering extra responsibilities or tasks. In addition, seeking resources could be used as a tool to achieve goals at work by asking coworkers or the manager for advice. Moreover, according to the model, the impact of job resources on engagement is highest when job demands are high (Bakker & Demerouti, 2007). Thus, the model suggests that job demands does not result in higher work engagement (Bakker et al., 2016), this is supported by empirical evidence (Tims et al., 2013a). Therefore, it is expected that the job crafting dimension reducing job demands is not related to

work engagement and OCB. Concluding, seeking challenges and resources are a way of acquiring job resources and based on the model one can expect that the job crafting dimensions seeking challenges and seeking resources are related to OCB, and mediated by work engagement.

In line with the COR model (Hobfoll, 1989), employees can seek resources and challenges in order to optimize their resources. By seeking challenges the employee invests resources in order to increase their resources. Seeking resources in turn, provides the employee with additional resources (Dawson et al., 2015). Resource gain is expected to lead to increased well-being. Since work engagement is defined as a type of well-being it is likely that seeking challenges and resources will lead to work engagement (Schaufeli, Taris, & Van Rhenen, 2008; Harter, Schmidt, & Keyes, 2002; Bakker & Oerlemans, 2011). We assume that engaged employees will have an abundant amount of resources which they will invest in their job and therefore show extra-role behavior like OCB.

Research found that the job crafting dimension seeking resources was positively related to work engagement (Demerouti, Bakker, & Halbesleben, 2015b; Demerouti et al., 2015a), and a significant effect between both seeking challenges and resources and work engagement was found (Harju, Hakanen, & Schaufeli, 2016). Moreover, work engagement is significantly related with OCB (Crawford, Lepine, & Rich, 2010). The mediating role of work engagement was included in a recent study from Demerouti et al. (2015a), who found a significant relation between OCB and seeking resources through work engagement. Additionally, more researchers proposed a mediating effect of work engagement in the relation between seeking challenges and resources and OCB (Tims, Bakker, & Derks, 2015). Concluding, the JD-R model supports the expected relation between seeking challenges, seeking resources, work engagement and OCB. This implies that the more employees seek resources and challenges, the higher their work engagement and the higher their level of OCB. This leads to the following hypotheses:

H2. *Work engagement has a partial mediating effect in the relationship between seeking challenges and organizational citizenship behavior (2a), and seeking job resources and organizational citizenship behavior (2b).*

Mindfulness as predictor of OCB, mediated by work engagement

This section will elaborate on the concept of mindfulness, in relation to work engagement and OCB. Research found that mindfulness can be defined as a personal resource (Taylor & Millear, 2016). Personal resources are positive self-evaluations which have close connections with resiliency and involve the individual's belief in successfully controlling and influencing the environment (Hobfoll, Johnson, Ennis, & Jackson, 2003). Mindfulness can be described as a condition of consciousness and is defined as "a receptive attention to and awareness of present events and experience" (Brown et al., 2007, p. 212). Fundamental in the concept mindfulness is acceptance of the present, which increases employees' resiliency in adapting to the work environment. This enables them to accept their level of resources and makes them more aware of alternative resources (Kroon, Menting, & van Woerkom, 2015). Concluding, mindfulness can be defined as a personal resource since resiliency and adaptability to the environment are key elements of both concepts.

The proposed relation between mindfulness as a personal resource, engagement and OCB is supported by the JD-R model of work engagement (Demerouti et al., 2001). A study from Robins et al., (2015) investigated weather personal resources should be added to the JD-R model in order to contribute in predicting work engagement. In this adjusted JD-R model, the explained variance of engagement was 24%, from which personal resources explained 3%. Xanthopoulou, Bakker, Demerouti, and Schaufeli (2009) argue that personal resources are similar to job resources in the way they function. For example, personal resources have the ability to stimulate personal growth and development, and can be helpful in achieving goals. Personal resources play an intrinsic motivational role by fostering personal growth, and learning and development. In addition, due to the influence of these resources on achieving work goals, they also motivate extrinsically. Both motivational roles are likely to result in work engagement (Bakker & Demerouti, 2008). Concluding, personal resources are expected to be positively related to work engagement. In turn, work engagement is positively related to different types of performance, such as in-role performance or extra-role performance (Bakker & Demerouti, 2008). Thus, it is expected that mindfulness is positively related to work engagement, and that work engagement influences extra-role performance, such as OCB.

The central assumption of the COR model (Hobfoll, 1989) is that individuals aim to preserve, protect and obtain resources. According to the COR theory, resource gain is expected to lead to well-being. Mindful employees are experiencing open awareness to the present, which

enables them to notice new opportunities to gain resources (Kroon et al., 2015). This resource gain is expected to lead to an increased level of well-being, and since work engagement is known as a type of well-being (Schaufeli et al., 2008; Harter et al., 2002; Bakker & Oerlemans, 2011), lead to work engagement. The COR theory also states that individuals will invest resources to increase their resources (Hobfoll, 1989). Since engaged employees are expected to sufficient resources, it is more likely they will invest them in their job and thus show behavior which goes beyond their formal job description (Demerouti et al., 2015a).

Empirical evidence shows that personal resources are related to work engagement (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007; Barbier, Hansez, Chmiel, & Demerouti, 2013). Furthermore, more researchers report a significant positive relation between mindfulness and work engagement (Leroy, Anseel, Dimitrova, & Sels, 2013; Malinowski & Lim, 2015; Zivnuska, Kacmar, Ferguson, & Carlson, 2015). Concluding, mindfulness can be categorized as a personal resource and is therefore likely to result in higher work engagement, which is expected to lead to higher levels of OCB. Consequently, the following hypothesis is formulated:

H3. *Work engagement has a mediating effect in the relationship between mindfulness and organizational citizenship behavior.*

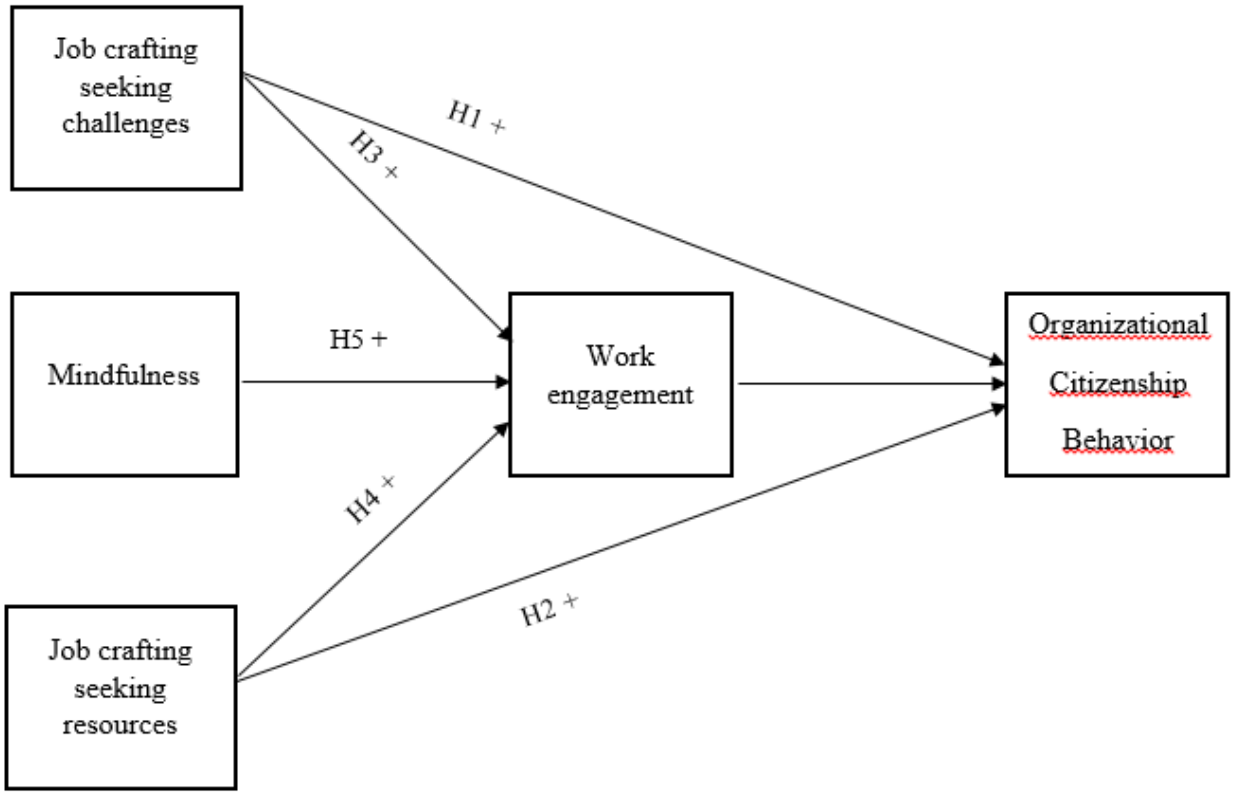

Figure 1. Conceptual model

Method

Procedure

This study investigates the positive relation between mindfulness, job crafting, OCB, and the extent to which these relations are partially mediated by work engagement. In order to test the hypotheses, a cross-sectional survey was conducted, which means that the data collection is gathered at one moment in time. The data was collected from employees working in different departments, consisting of at least seven employees and a manager. The data collection of this study was conducted in collaboration with Bachelor course 760433: Research in Human Resource Studies (Pre-Master) which is part of the Bachelor program Human Resource Studies, given at Tilburg University. The students who attended this course gathered data following a strict procedure. First, they contacted the manager of a department. When a department was willingly to participate in the research, a list with the details of all the subordinates was provided by the manager. These details include initials, birth dates and gender of the employees. From this list, a

lecturer of the Department of Methodology and Statistics at Tilburg University drew a random sample of five employees from all employees of that given department. These employees were asked to fill out a questionnaire, their anonymity and confidentiality was guaranteed. The scales of the constructs and control variables used in this study are presented in appendix A.

Population and sample

In this research a convenience sample was used in order to select the work units, for selection of the employees from each work unit, implicit stratified sampling was used (as described above). The sample includes a wide range of organization types; 16,7% health and welfare, 13,1% education, 12,5% hospitality, 12,1% industry, 11,5% business services, 7,9% trade, 3,6% financial services, 3,3% energy and water, 3% culture and other services, 1,6% public administration, 1% transport and communication, and 13,8% other. For instance, the category other consists of municipality and retail, the specification of this category is provided in appendix C. The distribution of the organization size in the sample is as follows; 19.2% less than 25 employees, 7.6% 26-50 employees, 10.5% 51-100 employees, 7.3% 101-200 employees, 12.5% 201-500 employees, 11.1% 501-1000 employees and 31.8% more than 1000 employees. Moreover, the sample also consists of a wide range of occupations. For instance, modal job types are jobs in health care (e.g. nurse, doctor), jobs in the food service industry (e.g. waiter, bartender, chef), administrative jobs, educational jobs and pedagogical jobs. A list with details on all respondents' occupations is provided in Appendix C. Furthermore, more information concerning contract type, contract hours and organizational tenure can be found in Table 1.

In total 405 employees participated in this study, with a response rate of 86.9%. The sample characteristics were as follows, of all employees in the sample 43.4% is male, and 56.6% female. The age of the respondents ranges between 17 and 68 years, with an average being 36 years old. In addition to this, the respondents are on average contracted to work 27.3 hours a week, and 33.7% has a small part-time job, 10.4% a large part-time job and 55.9% a full-time job. The education level was distributed as follows; 1.5% primary school (elementary), 8.5% lower secondary education and lower vocational education (basic), 37.6% upper secondary education and secondary vocational education (middle), 31.8% higher professional education (higher), and 20.6% university (academic). In comparison to this, statistics show that 22.05% of the Dutch working population obtained a higher degree (Centraal Bureau voor de Statistiek [CBS], 2016b). In addition,

13.5% of the Dutch working population has an academic background (CBS, 2016b). Therefore, we can conclude that this sample might give a distorted view.

Instruments

Job crafting

Job crafting was measured using a five-point Likert scale from Petrou et al. (2015). The scale has nine items and the following types of job crafting are included: seeking resources and seeking challenges. A sample question from the dimension seeking resources is 'I contact other people from work (e.g., colleagues, supervisors) to get the necessary information for completing my tasks'. Additionally, a sample item from the seeking challenges dimension is 'I ask for more responsibilities'.

A PCA was conducted, the KMO of .839 which suggests a good factor analysis. Based on the Eigenvalues and the scree plot both two factors should be extracted. The component matrix also supports the use of the two job crafting dimensions, the factor loadings of component 1 on one dimension were above .65. In addition to this, the factor loadings of component 2 on the other dimension also succeeded the preferred .30 (See Appendix B). No items had to be deleted. The reliability analysis of seeking challenges showed a Chronbach's α of .86. Moreover, the Chronbach's α for seeking resources is .84, the Chronbach's α if item deleted from both scales did not suggest to remove an item from the scale.

Organizational citizenship behavior

For the measurement of OCB, a scale from Goodman and Svyantek's was used (1999). A shortened version of this scale was used, consisting of four items which are measured on a seven-point Likert scale. A sample item is 'I volunteer to do things not formally required by the job'.

The results of the PCA support a good factor analysis, with factor loadings above .30 and a KMO of .783 (See Appendix B). The results suggest the use of one factor with an Eigenvalue of 2.486 and explained variance of 62.138. The reliability analysis shows a Chronbach's α of .80 and no items had to be deleted.

Work engagement

The Utrecht Work Engagement Scale (UWES) scale was used to measure work engagement. The original scale has 17 items and is called the UWES-17 (Schaufeli et al., 2002), Schaufeli, Bakker and Salanova (2006) shortened this scale and named it the UWES-9. Several studies recommend the use of the UWES-9 compared to the UWES-17, the studies investigated validity and reliability amongst other concepts with regard to these scales (Mills, Culbertson, & Fullagar, 2012; Seppälä et al., 2009). In this study a shortened version of the UWES-9 is used. In consistence with the definition of work engagement and previous research, only the components vigor and dedication are included in the questionnaire. These concepts both contain three items on a seven-point rating scale. A sample item is 'When I get up in the morning, I feel like going to work'.

After conducting a PCA, the KMO=.841 which supported the use of the scale. Furthermore, the factor analysis suggested using one factor (Eigenvalue= 4.059), which was confirmed by the scree plot. The percentage explained variance found is 67.645. The factor loadings for all items were above .30 (See Appendix B). The reliability analysis showed a Chronbach's α of .90, no items had to be deleted.

Mindfulness

The Mindfulness Attention Awareness Scale (MAAS), is used to measure Mindfulness (Brown & Ryan, 2003). This scale consists of 15 items, which are measured on a six-point Likert scale, coded 1: almost always and 6: almost never. All items of the scale are reverse-scored. A sample item is 'I drive places on "automatic pilot" and then wonder why I went there'.

The PCA supported a good factor analysis with a KMO of .915, the eigenvalues suggested three factors, while the scree plot suggests one factor. Using one factor would result in a variance explained of 30.261. Even though the use of one factor was suggested by the scree plot, this was not supported since a simple structure was not found. When forcing into one factor, all factor loadings succeeded 0.3 and therefore one factor was extracted (See Appendix B). With the use of one factor (Eigenvalue = 6.037) the variance explained is 40.245. The reliability analysis shows a Chronbach's α of .88 and indicates that one item had to be removed from the analysis (Chronbach's α if item deleted= .89). However, this was a marginal difference and the corrected item-total correlation was .30, therefore this item was not removed from the scale.

Control variables

Some control variables are added, since it is expected they could affect the relationships tested in this study. Research has found that it is likely that OCB will differ among men and women (Kark, & Waismel-Manor, 2005) as well as with age (Jahangir, Akbar, & Haq, 2004). A study from Shao and Skarlicki (2009), found that mindfulness differs across gender. Several authors suggest that job crafting could differ according to age (Kooij et al., 2015; Bertolino, Zacher, Kooij, & Antipolis, 2015) and that higher educated individuals are more likely to craft their job compared to lower educated individuals (Wrzesniewski & Dutton, 2001). Research shows that organizational tenure influences job crafting (Berg, Wrzesniewski, & Dutton, 2010; Tims et al., 2013). Other variables which could influence the relations in the conceptual model are the contract type and contract hours. Therefore, the variables gender, age, education level, contract type, organizational tenure, and contract hours are added in the analysis as control variables.

The control variable education level is categorized into primary school, lower secondary education, upper secondary education, higher professional education and university. In addition, contract type is categorized into open-ended contract and other contract type. Furthermore, the control variable contract hours is categorized according to the definition of CBS (2016a), namely less than 20 hours a week, which is called a small part-time job, 20-35 hours per week which is a large part-time job and last, 35 or more hours a week, which is labelled as full-time job (CBS, 2016a).

Statistical analysis

In order to test the seven hypotheses, four multiple regression analysis were conducted. In the first regression analysis, the control variables are added in block 1, the dependent variable is job crafting, and mindfulness will be added as independent variable. In the second regression analysis with engagement as dependent variable, the control variables will be added in block 1, then the job crafting dimensions seeking resources and seeking challenges will be added in block 2, and in block 3 mindfulness will be added to the analysis. In order to test the direct effect between mindfulness and job crafting dimension seeking challenges, an analysis was conducted with the control variables, mindfulness and the job crafting dimensions seeking challenges. A separate analysis was conducted to test the direct effect between mindfulness and seeking resources. For the last analysis, again the control variables are added in block 1, work engagement in block 2 and

in block 3 the job crafting dimensions seeking resources, seeking challenges, and mindfulness were added, OCB was added as dependent variable.

To test the mediation, the guidelines from MacKinnon, Fairchild, and Fritz (2007) are followed. The independent variable has to be significantly related to the mediator, when the other variables of the model and control variables are included in the analysis. Second, the mediator needs to show a significant relation with the dependent variable, with presence of the control variables and other variables of the model in the analysis. If these criteria are met a mediation effect is suggested. Subsequently, the Sobel test was used to test if the mediation effect is significant.

Results

Descriptive statistics

Table 1 shows the means, standard deviations and correlations between all studied variables and control variables. According to Pallant (2013), correlations are considered small between .10 and .29, moderate between .30 and .49, and large between .50 and .100. Some correlations are consistent with the propositions in the theoretical framework. For instance, the data supports a positive, weak but significant relationship between job crafting seeking challenges and work engagement (r =.19, p < .01), as well as job crafting seeking resources, which is positively moderately and significantly related to work engagement (r = .34, p < .01). Furthermore, seeking challenges shows a positive, moderate and significant relation with OCB (r = .43, p < .01), along with work engagement which shows a positive, moderate and significant relation with OCB (r =.40, p < .01). The data shows some large correlations between the studied variables, seeking challenges shows a positive, strong and significant relation with seeking resources (r = .54, p < .01). Furthermore, seeking resources is positively, strongly and significantly related to OCB (r = .55, p < .01).

The control variable organizational tenure shows a negative, small but significant correlation with seeking challenges (r = -.13, p < .05), as well as seeking resources which is negatively, weakly and significantly related to organizational tenure (r = -.18, p < .01). In other words, the longer an employee is working in the organization, the more challenges and resources it will seek. The data shows a negative, small, yet significant relation between mindfulness and

education level (r = -.12, p < .05). Additionally, seeking resources is positively, moderately and significantly related to education level (r = .35, p < .01), as well as seeking challenges which is positively, weakly and significantly related to education level (r = .19, p < .01). Lastly, OCB is positively, moderately and significantly related to education level (r = .24, p < .01). This means that employees with a higher education level show higher levels of OCB, seek more resources and challenges, and are less mindful.

Table 1.

Means, Standard Deviations and Pearson Correlations

	M	SD	N	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Mindfulness	4.20	0.71	360										
2. Job crafting seeking challenges	2.58	1.02	396	-.05									
3. Job crafting seeking resources	3.27	0.73	395	-.12*	.54**								
4. Work engagement	4.91	1.05	399	.16**	.19**	.34**							
5. OCB	2.99	0.78	402	.03	.43**	.55**	.40**						
6. Gender	43,4%[1]	56,6%[2]	396	-.12*	-.02	.00	-.10*	-.06					
7. Age	36.05	12.84	399	.20**	-.18**	-.22**	.04	-.06	-.01				
8. Education level	3.62	0.95	402	-.13*	.19**	.35**	.06	.24**	-.17**	-.03			
9. Contract type	64,3%[1]	35,7%[2]	387	-.07	.15**	.19**	-.05	-.03	-.08	-.42**	.02		
10. Organizational tenure	8.24	9.25	396	.08	-.13*	-.18**	.00	-.01	-.02	.66**	-.11*	-.46**	
11. Contract hours	2.22	0.92	338	.02	.10	.23**	.20**	.19**	-.34**	.18**	.41**	-.16**	.15**

Notes: * $p < .05$ (two-tailed), ** $p < .01$ (two-tailed); age: in years; organizational tenure: in years; min/max scores for mindfulness (1-6); job crafting seeking challenges, job crafting seeking resources (1-5); work engagement (1-7); OCB (1-7); education level (1-5); gender: male (1), female (2); contract type: open-ended contract (1), other contract type (2); contract hours: small parttime job (1), large parttime job (2), fulltime job (3)

Regression analyses

Job crafting dimensions seeking challenges and seeking resources as predictor of OCB

Hypothesis 1a stated that the job crafting dimension seeking challenges is positively influences OCB. Additionally, hypothesis 1b predicts that the job crafting dimension seeking resources is positively related to OCB. The results in Table 1 show a positive significant effect between seeking challenges and OCB (β =.21 p <.01), therefore hypothesis 1a is confirmed. The results of the regression analysis (Table 1) also show that seeking resources and OCB are positively and significantly related (β =.46 p <.01), meaning that hypothesis 1b is accepted.

The mediating role of work engagement in the link between job crafting dimensions seeking challenges, seeking resources and OCB

The proposed mediation of work engagement between job crafting and OCB was tested. Hypotheses 2a proposes that the relation between job crafting seeking challenges and OCB is partially mediated by work engagement. Hypothesis 2b predicts the partial mediation of work engagement between job crafting seeking job resources and OCB. Following the guidelines of MacKinnon et al. (2007), the independent variable job crafting seeking resources and job crafting seeking challenges have to be significantly related to the mediator work engagement, and this mediator has to be significantly related to the dependent variable OCB in order to function as a mediator. The data suggests that no effect exists of the job crafting dimension seeking challenges on work engagement, because the effect in the sample is very small and not significant (β = .03 p >.05), whereas the job crafting dimension seeking resources has a significant effect (β .37 p <.01) (Table 2). Work engagement, in turn, is significantly related to OCB (β = .24 p <.01) (Table 1). These results suggest a mediation effect of work engagement between the job crafting dimension seeking resources and OCB. The Sobel test is used to check if the meditation effect is significant. The Sobel test for hypothesis 2b does show a significant result (z = 3.01 p <.01). Concluding, hypothesis 2a stating that the relation between job crafting dimension seeking challenges and OCB is partially mediated by work engagement, is rejected. In addition, hypothesis 2b stating that the relation between the job crafting dimension seeking resources and OCB is partially mediated by work engagement, is confirmed.

Table 2.

Results of regression analyses predicting OCB from seeking challenges, seeking resources, work engagement, and mindfulness

	OCB			
	M1	M2	M3	M4
Gender	0.01	-.06	-.04	-.03
Organizational tenure	.06	.04	.06	.07
Age	-.13	-.01	-.03	-.04
Contract hours	.12	.00	-.03	-.03
Contract type	-.05	-.14**	-.12	-.12
Education level	.19**	.04	.07	.08
Seeking challenges		.21**	.20**	.20**
Seeking resources		.46**	.37**	.37**
Work engagement			.24**	.23**
Mindfulness				.05
R^2	.08	.36	.40	.40
ΔR^2	.08	.28	.05	.00
F change	4.33**	68.27**	24.03**	1.03

Notes: * $p < .05$, ** $p < .01$; $n = 265$; [a] (1) male, (2) female; [b](1) open-ended contract, (2) other contract type

Work engagement in the link between mindfulness and OCB

Hypothesis 3 stated that work engagement mediates the link between mindfulness and OCB. Table 3 shows that the proposed relation between mindfulness and work engagement is significant (β=.17 p<.01). Furthermore, work engagement and OCB are significantly positively related (β= .23, p <.01) (Table 2). The criteria for a mediation effect are met, and a Sobel test was used to check whether the mediation is significant. The Sobel test shows a significant result (z=2.29, p < .01) and therefore hypothesis 3 is accepted. According to MacKinnon et al. (2007), a complete mediation exists when the independent variable has no significant effect on the dependent variable.

Since mindfulness is not significantly related to OCB (β= .05, p > .05) (Table 2), the data supports a full mediation of work engagement between mindfulness and OCB.

Table 3.

Results of regression analyses predicting work engagement from seeking challenges, seeking resources, and mindfulness

	Work engagement		
	M1	M2	M3
Gender[a]	-.04	-.09	-.07
Organizational tenure	-.08	-.08	-.06
Age	.04	.12	.07
Contract hours	.20**	.12	.12
Contract type[b]	-.04	-.10	-.09
Education level	.04	-.14*	-.12
Seeking challenges		.03	.02
Seeking resources		.38**	.39**
Mindfulness			.17**
R^2	.05	.17	.20
ΔR^2	.05	.12	.02
F change	2.22*	13.71**	2.30

Notes: * $p < .05$, ** $p < .01$; $n = 265$; [a]1 = male, 2 = female; [b]0 = open-ended contract 1 = other contract type

Conclusion and discussion

Main findings

This research concerned the relation between job crafting and OCB, and investigated the role of mindfulness in this relationship. In addition to this, we examined whether work engagement mediates this relation. A survey research was conducted in which 405 employees participated. The results support the expected relation between both job crafting dimensions and OCB, and the

proposed mediation of work engagement between job crafting dimension seeking resources and OCB was confirmed. The expected mediation of work engagement in the relation between seeking challenges and OCB, was not supported by the analyses. Furthermore, the results support the expected mediation of work engagement between mindfulness and OCB.

Interpretation

First, the expected effect in hypotheses 1a and 1b, between the job crafting dimensions seeking resources and seeking challenges with OCB was confirmed. This indicates that the more employees seek resources, the higher the level of OCB. The same reasoning goes for the job crafting dimension seeking challenges. These results are in line with the COR theory from Hobfoll (1989) which states that individuals strive to optimize their resources by protecting and maximizing them. Seeking resources can be seen as a way of acquiring resources and seeking challenges is an investment of resources in order to gain more resources. Employees who seek challenges and resources are expected to have plentiful resources which they can invest in their job, and show extra-role behavior. Likewise, Demerouti et al. (2015a) stated that optimizing ones resources is related to OCB.

Second, hypothesis 2a showed an unexpected result, work engagement did not act as a partial mediator in the relation between the job crafting dimension seeking challenges and OCB. This implies that the direct effect between seeking challenges and OCB is not mediated by work engagement. The proposed relation was grounded in the JDR-model of work engagement (Bakker & Demerouti, 2008) and the COR theory (Hobfoll, 1989). According to the JD-R framework job resources that stimulate personal growth and development lead to work engagement and in turn to OCB. When an employee succeeds in managing a challenge he is expected to achieve personal growth and development and becomes more engaged, and eventually shows higher levels of OCB (Bakker & Demerouti, 2008). According to the COR model (1989) seeking challenges is an investment which is expected to lead to enriched resources. These employees are subsequently expected to have many resources which they can invest in extra-role behavior (Demerouti et al., 2015a). The unexpected finding of this study is in line with a previous study from Demerouti et al. (2015a). An explanation can be found in the JD-R model itself, job resources and challenging demands are expected to stimulate work engagement by helping the employee achieving work goals and by stimulating personal growth and development (Demerouti et al., 2001). However,

challenging demands without presence of job resources is less motivating and may therefore not lead to work engagement (Demerouti et al., 2015a). The availability of job resources can strengthen the employees' feeling of competence and make the employee confident it is possible to achieve his goal, this can in turn lead to work engagement (Tadić, Bakker, & Oerlemans, 2015). This is supported by empirical evidence, showing that the relation between daily challenging job demands and daily work engagement is moderated by daily job resources. More specifically, a high level of job resources strengthens the relation between challenging demands and work engagement (Tadić et al., 2015).

Third, hypothesis 2b showed an expected result, the relation between seeking resources and OCB is mediated by work engagement. This relation is founded in the JDR-model of work engagement from Bakker and Demerouti (2008) and the COR theory (Hobfoll, 1989). Following the reasoning of the JD-R model (Demerouti et al., 2001) seeking resources will lead to a higher level of job resources, which is expected to lead to work engagement and OCB. Building on the COR theory (Hobfoll, 1989), resource gain is expected to lead to work engagement. Therefore, we predicted a positive relation between seeking resources and work engagement which will lead to OCB due to abundant resources which the employee will invest in the job. Concluding, the results of hypotheses 2a and 2b suggest that seeking resources is more important in explaining work engagement than seeking challenges. It is expected that hindering job demands do not result in work engagement since they are perceived as stressful by the employee and prevent them from functioning optimally (Tims et al., 2013). Moreover, challenging job demands were expected to stimulate employees by offering master experiences (Tims et al., 2012). However, the expected positive outcome do not prevent the challenging demands from being perceived as stressful and feeling tired by the employee (Tims et al., 2012; Tims et al., 2013). On the contrary, empirical evidence does show a significant relation between both seeking challenges and engagement, but also between seeking challenges and burnout (Crawford et al., 2010). This implies that challenging demands do not necessary result in engaged employees, while job resources protect the employees from the negative effect of job demands. Therefore, it is likely that seeking resources is a more important predictor of engagement than seeking challenges. Furthermore, a direct effect was found between seeking challenges and OCB, and seeking resources and OCB. This implies that other processes influence this relation.

Fourth, hypothesis 3 predicted a mediating effect of work engagement in the relation between mindfulness and OCB, supported by the JD-R model and the COR theory (Demerouti et al., 2001; Hobfoll, 1989). Since research suggests the conceptualization of mindfulness as a personal resource (Taylor & Millear, 2016; Kroon et al., 2015), building upon the JD-R model (Demerouti et al., 2001) it is expected that mindfulness stimulates personal growth and development and is helpful in reaching work related goals. Therefore, they are likely to act in a similar manner as job resources and result in work engagement and OCB. Since attention and awareness are central in the concept mindfulness, it is expected that mindful employees will observe additional resources, based on the COR model this research gain will lead to work engagement. In turn, these employees are expected to invest their plentiful resources in their job and show OCB. Hypothesis 3 confirmed the expected relation between mindfulness and OCB, completely mediated by work engagement.

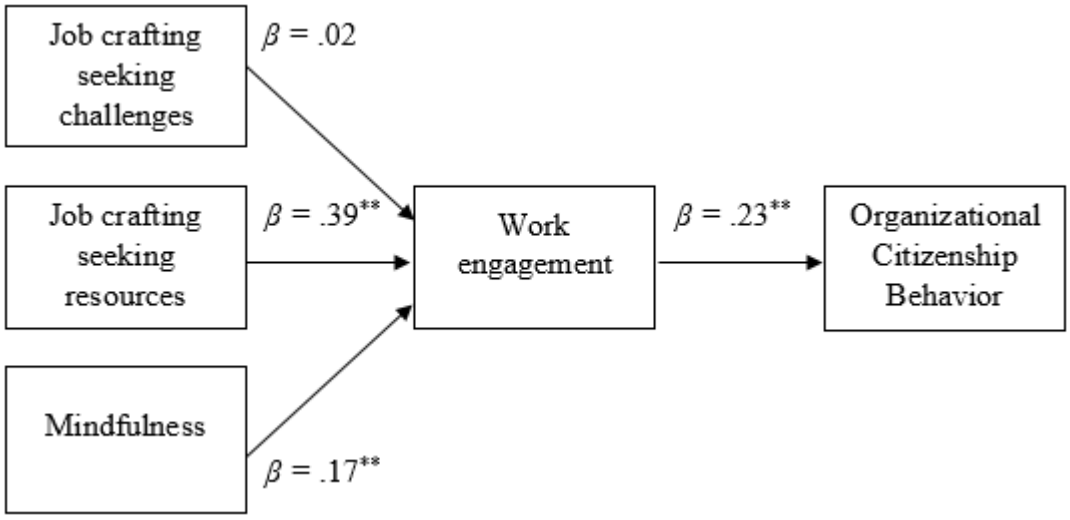

Figure 2. Summary of the mediation results with standardized values

Limitations and strengths

This study has several limitations. First, the usage of the cross-sectional design in this study, which means that the data is collected at one moment in time (Pallant, 2013). This can be seen as a limitation since no conclusions about causality can be drawn from this research (Mann, 2003). More specifically, even though significant results were found, this does not directly imply an effect in the proposed direction. Based on the literature in this study it is plausible that the effects found

reflect the right direction. However, some studies report relations in a different direction. For instance, a study from Tims et al., (2015) found that work engagement at T1 acts as a significant predictor of crafting job resources and challenging demands at T2. In addition to this, more studies found a significant relation with work engagement as predictor of types of job crafting (Lu, Wang, Lu, Du, & Bakker, 2014). Furthermore, it is expected that engagement influences personal resources, and thus mindfulness (Xanthopoulou et al., 2009). In order to test this, a longitudinal research design has to be conducted. For instance, since no research has been conducted on the relation between mindfulness and OCB, it is recommended to investigate this relation in more depth. In addition, drawing on the reasoning of mindfulness as a personal resource, and following the JD-R model of work engagement (Bakker & Demerouti, 2008), it is interesting to investigate whether OCB acts as a predictor of mindfulness. The JD-R model assumes that employees who show OCB are able to create their own personal and job resources, creating a loop in the model. Since mindfulness is conceptualized as a personal resource (Taylor & Millear, 2016), it is reasonable to assume a positive relation between OCB and mindfulness.

Second limitation is the convenience sampling of the departments, which was used in order to select the departments. This could affect the representativeness of the sample, compared to random sampling. Therefore, a chi-square goodness-of-fit test was conducted. The results indicate there was a significant difference in the proportion of education level identified in the current sample; 1.5% elementary, 8.5% basic, 37.6% middle, 31.8% higher, and 20.6% academic, as compared with the highest education level that is shown in the data of CBS (2016b); 5,3% elementary, 16,2% basic, 42,1% middle, 22,05% higher, 13,5% academic, χ^2 (4, n = 402) = 60.4, p < .001. A second chi-square goodness-of-fit test was conducted to check whether the distribution of small part-time job, large part-time job and full-time job in the sample reflects the Dutch working population. A significant difference in the proportion of contract type was identified in the current sample; small part-time job, 10.4% large part-time job and 55.9% full-time job in comparison with the data of CBS (2016a); 19.4% small part-time job, 29,8% large part-time job and 51,3% full-time job. χ^2 (2, n = 338) = 79.9, p < .001. Concluding, the sample is not representative for the Dutch employed population with respect to the highest education level and contract type.

Third, the collection of self-report data in order to measure psychological variables can lead to socially desirable responding (Perinelli & Gremigni, 2016). Social desirability is defined

as "the tendency to give answers that make the respondent good" (Paulhus, 1991, p.17). The content of self-report items consists of a descriptive and evaluative part. When an item is evaluated as desirable or undesirable the descriptive part of the self-report could be biased. It is reasonable to believe that social desirability could affect the variables used in this study. For instance, Organ and Ryan (1995) also recognized the subjective nature of OCB which can occur with self-report data which can possibly affect validity of the research. However, this study guaranteed anonymity, which decreases the likelihood that the respondents gave social desirable answers (Kelman, 1961). Concluding, the variables used in this study are possibly sensitive which can lead to socially desirable responding, however, this chance was decreased by assuring the respondents anonymity.

Some strengths in this study which can be distinguished. First, the number of respondents is noteworthy. This study has a total of 405 respondents, which is a remarkable amount. In addition, the shortcomings of the convenience sampling is partly reduced by the use of implicit stratified sampling in selecting employees from the department.

Recommendations for future research

Based on the findings of this study, several recommendations are done for future research. First, with regard to the methodology, it is suggested that the relations of this research will be investigated with a longitudinal design, or more specifically a day-to-day level design. It is possible that job crafting and mindfulness fluctuate over time, and therefore this phenomenon will be better to capture if it is investigated and compared on a daily basis, instead of measured at one moment in time. Furthermore, the direction of the effects found can be tested in a longitudinal design.

Second, since a significant direct effect was found between both job crafting dimensions and OCB, it might be interesting to investigate this relation in more depth. For instance, considering the motivational background behind this relationship. Additionally, it is still unclear why a direct relation exists between both job crafting dimensions and OCB, while the partial mediation of work engagement was only significant for the job crafting dimension seeking resources. Other studies also did not find this relationship, but did predict it (Demerouti et al., 2015; Petrou et al., 2012). Therefore it is an interesting subject to focus and elaborate on, by seeking other processes which influence this relation. Work engagement relates to job attitudes yet is still empirically distinct (Christian, Garza, & Slaughter, 2011). For instance, it is likely that job

attitudes like job satisfaction, organizational commitment or job involvement mediate the relation between seeking resources and challenges and OCB. Furthermore, another important aspect to investigate in relation with job crafting, is the role of coworkers. Since research shows that job crafting behavior of a focal employee can cause coworkers to perceive a higher workload and levels of conflict (Tims, Bakker & Derks, 2015) it is an interesting topic to include in the existing job crafting literature. Lastly, research found that the job crafting dimension seeking resources occurs significantly more often in the Netherlands compared to the US (Gordon, Demerouti, Le Blanc, & Bipp, 2015). Therefore it might be interesting to investigate this job crafting dimension in a cross-cultural setting.

Fourth, usage of multi-level data could provide some interesting insights in this field of study, and this data would possibly lower the bias of social desirable answers by using several visions. For instance, team job crafting could be related to team level engagement which could in turn lead to team performance. In addition to this, the relation between team level job crafting and individual job crafting, and team level engagement and individual work engagement could be implemented in this model. Earlier research suggests a linkage between individual and team level job crafting, and individual and team level engagement (Tims et al., 2013).

Third, the concept mindfulness is not investigated often in current research. Since it is an interesting subject and the data supports full mediation of work engagement in the relation between mindfulness and OCB, it is recommended to explore this concept further in the field of HR. For instance, psychological capital (PsyCap) is defined as "an individual's positive psychological state of development" (Luthans, Youssef, & Avolio, 2007, pg. 3) and consists of self-efficacy, optimism, hope, and resilience (Luthans et al., 2007). It has been shown to be related to work engagement (Paek, Schuckert, Kim, & Lee, 2015), and to mindfulness and work engagement (Malinowski & Lim, 2015). In addition to this, empirical evidence suggests that PsyCap plays a role in the JDR-model of work engagement (Bakker & Demerouti, 2008) (Xanthopoulou, 2007; Vink, Ouweneel, & Le Blanc, 2011; Min et al., 2015). Since the model in this study is based on this JDR-model, it is interesting for future research to add PsyCap in this model.

Practical recommendations

Based on the results of this study, several recommendations can be made to organizations. First, since the results of this study suggest that the more people craft their job, the more OCB they will

show, it is beneficial for the organization to support and stimulate job crafting behavior. This can be done by implementing a job crafting intervention, which is expected to stimulate job crafting behavior of employees (Van den Heuvel et al., 2015; Van Wingerden et al., 2015). Another option is the so called job crafting exercise, which helps the employees discover opportunities where they can craft their job by accessing their job in a visual way (Berg et al., 2008). Furthermore, research found that a JD-R intervention leads to higher levels of job crafting and is therefore also suited for organizations to implement (Van Wingerden, Bakker, Derks, 2016). This JD-R intervention consists of 3 sessions, focused on personal resources, job resources and evaluation. It includes a job crafting plan and a period of four weeks in which the employee must implement the job crafting plan at the workplace (Van Wingerden et al., 2016). In addition, empowering employees provides them with increased job control, they can use this leeway to craft their job (Petrou et al., 2012). Furthermore, both job crafting dimensions could be encouraged via coaching sessions and employee development plans, conducted by the manager (Petrou et al., 2015). Lastly, organizations should communicate and acknowledge job crafting as an existing and positive phenomenon. Organizations can stimulate job crafting, but this behavior must be accepted by and become part of the organizational culture to make this change permanent (Cummings & Worley, 2015). Moreover, especially the job crafting dimension seeking resources can be valuable for an organization. This study shows that employees who craft their job in terms of seeking resources are more engaged and in turn, are more likely to show OCB.

Second, the results also show that mindful employees are more engaged, and in turn show higher levels of OCB. Therefore organizations could implement HR practices to help employees reach a mindful state. Organizations could stimulate this by providing formal mindfulness training to their employees, which includes exercises aiming at broadening the capacity for mindfulness. Research has found that participants of a formal mindfulness training become more mindful (Hölzel et al., 2011).

Main conclusion

In conclusion, it is remarkable that the job crafting dimension seeking challenges did not show a significant relation with OCB, partially mediated by work engagement. This is not in line with the COR theory (Hobfoll, 2001). Job crafting is sometimes perceived in a negative way, for instance, coworkers can experience higher workload or experience levels of conflict when a focal employee

crafts his job (Tims, Bakker & Derks, 2015). Furthermore, managers are usually not aware of job crafting behavior, since it occurs without negotiation (Hornung, Rousseau, Glaser, Angerer, & Weigl, 2010). However, the results of this study show that job crafting has positive outcomes, like OCB and OCB through engaged employees. There are still inconsistent results in this field of research, therefore it is important for organizations to stimulate job crafting behavior, and for future research to keep investigating job crafting and its effects. Especially the complete mediation found of work engagement between mindfulness and OCB is striking, since this relation was not investigated before. This study highlights the effects of mindfulness in organizational settings and shows that mindfulness is applicable as a work-related construct.

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Appendix A: employee questionnaire

General

1. How long have you been working in this organization? Year: Month:
2. How long have you been working in this work unit? Year: Month:
3. What type of employment contract do you have? □ Open-ended contract □ Fixed-term contract □ Employment agency / Employee posting □ Different, namely: …..
4. How many hours are you contracted to work per week? …….. hours a week
5. What is your occupation? ……..……..……..……..……..
6. What are your two most important job tasks? 1. 2.
7. Do you provide supervision for staff? □ No □ Yes, number of supervised employees: ……..

8. What is your birth date?	Year:…….. Month:……..
9. Are you… 1. □ Male 2. □ Female	
10. What is your highest level of education? 1. □ ‘elementary’: primary school 2. □ ‘basic’: lower secondary education, lower vocational education 3. □ ‘middle’: upper secondary education, secondary vocational education 4. □ ‘higher’: higher professional education 5. □ ‘academic’: university	

Work engagement

The following statements are about how you feel at work. Please indicate the extent to which the following statement describe your situation.	Never	Almost never	Rarely	Sometimes	Often	Very often	Always
71. At my work, I feel bursting with energy.	1	2	3	4	5	6	7
72. At my job, I feel strong and vigorous.	1	2	3	4	5	6	7
73. When I get up in the morning, I feel like going to work.	1	2	3	4	5	6	7
74. I am enthusiastic about my job.	1	2	3	4	5	6	7
75. My job inspires me.	1	2	3	4	5	6	7
76. I am proud of the work that I do.	1	2	3	4	5	6	7

OCB

The next questions are about your behavior at work. Please indicate the extent to which the following statements describe your situation.	Never	Sometimes	Regularly	Often	Very often
85. I volunteer to do things not formally required by the job.	1	2	3	4	5
86. I help others when their workload increases.	1	2	3	4	5
87. I make innovative suggestions to improve the overall quality of the department.	1	2	3	4	5
88. I willingly attend functions not required by the organization, but helps in its overall image.	1	2	3	4	5

Job crafting dimensions seeking challenges and seeking resources.

The next questions are about your behavior at work. Please indicate the extent to which the following statements describe your situation.	Never	Sometimes	Regularly	Often	Very often
93. I ask others for feedback on my job performance.	1	2	3	4	5
94. I ask colleagues for advice.	1	2	3	4	5
95. I ask my supervisor for advice.	1	2	3	4	5
96. I try to learn new things at work.	1	2	3	4	5
97. I contact other people from work (e.g., colleagues, supervisors) to get the necessary information for completing my tasks.	1	2	3	4	5
98. When I have difficulties or problems at my work, I discuss them with people from my work environment.	1	2	3	4	5
99. I ask for more tasks if I finish my work.	1	2	3	4	5
100. I ask for more challenging odd jobs.	1	2	3	4	5
101. I ask for more responsibilities.	1	2	3	4	5

Mindfulness

Below is a collection of statements about things that can happen to people. Please indicate how frequently or infrequently you currently have each experience: almost never, very infrequently, somewhat infrequently, somewhat frequently, very frequently, or almost always?	Almost never	Very infrequently	Somewhat infrequently	Somewhat frequently	Very frequently	Almost always
133. I could be experiencing some emotion and not be conscious of it until some time later.	1	2	3	4	5	6
134. I break or spill things because of carelessness, not paying attention, or thinking of something else.	1	2	3	4	5	6

135. I find it difficult to stay focused on what's happening in the present.	1	2	3	4	5	6
136. I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	1	2	3	4	5	6
137. I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	1	2	3	4	5	6
138. I forget a person's name almost as soon as I've been told it for the first time.	1	2	3	4	5	6
139. It seems I am "running on automatic" without much awareness of what I'm doing.	1	2	3	4	5	6
140. I rush through activities without being really attentive to them.	1	2	3	4	5	6
141. I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.	1	2	3	4	5	6
142. I do jobs or tasks automatically, without being aware of what I'm doing.	1	2	3	4	5	6
143. I find myself listening to someone with one ear, doing something else at the same time.	1	2	3	4	5	6
144. I drive places on "automatic pilot" and then wonder why I went there.	1	2	3	4	5	6
145. I find myself preoccupied with the future or the past.	1	2	3	4	5	6
146. I find myself doing things without paying attention.	1	2	3	4	5	6
147. I snack without being aware that I'm eating.	1	2	3	4	5	6

Appendix B: Factor loadings

Table B1.

Factor loadings from the PCA analysis of the job crafting scale, dimensions seeking challenges and seeking resources.

Scale		
I ask others for feedback on my job performance.	.663	
I ask colleagues for advice.	.722	-.405
I ask my supervisor for advice.	.683	-.427
I try to learn new things at work.	.715	
I contact other people from work (e.g., colleagues, supervisors) to get the necessary information for completing my tasks.	.738	
When I have difficulties or problems at my work, I discuss them with people from my work environment.	.666	
I ask for more tasks if I finish my work.	.701	.411
I ask for more challenging odd jobs.	.713	.583
I ask for more responsibilities.	.693	.569
Eigenvalue	4.405	1.329
Chronbach's α seeking challenges	.855	
Chronbach's α seeking resources	.839	

Principal component analysis

Table B2.

Factor loadings from the PCA analysis of the organizational citizenship behavior scale.

Scale	
I volunteer to do things not formally required by the job.	.798
I help others when their workload increases.	.760
I make innovative suggestions to improve the overall quality of the department.	.811
I willingly attend functions not required by the organization, but helps in its overall image.	.784
Eigenvalue	2.486

Chronbach's α	.797

Principal component analysis

Table B3.

Factor loadings from the PCA analysis of the Utrecht Work Engagement Scale.

Scale	
At my work, I feel bursting with energy.	.794
At my job, I feel strong and vigorous.	.787
When I get up in the morning, I feel like going to work.	.817
I am enthusiastic about my job.	.889
My job inspires me.	.843
I am proud of the work that I do.	.801
Eigenvalue	4.059
Chronbach's α	.902

Principal Component Analysis

Table B4.

Factor loadings from the PCA analysis of the Mindfulness Attention Awareness Scale.

Scale	
I could be experiencing some emotion and not be conscious of it until some time later.	.506
I break or spill things because of carelessness, not paying attention, or thinking of some thing else.	.601
I find it difficult to stay focused on what's happening in the present.	.701
I tend to walk quickly to get where I'm going without paying attention to what I experience along the way.	.692
I tend not to notice feelings of physical tension or discomfort until they really grab my attention.	.525
I forget a person's name almost as soon as I've been told it for the first time.	.357
It seems I am "running on automatic" without much awareness of what I'm doing.	.695
I rush through activities without being really attentive to them.	.734

I get so focused on the goal I want to achieve that I lose touch with what I am doing right now to get there.	.682
I do jobs or tasks automatically, without being aware of what I'm doing.	.713
I find myself listening to someone with one ear, doing something else at the same time.	.653
I drive places on "automatic pilot" and then wonder why I went there.	.723
I find myself preoccupied with the future or the past.	.470
I find myself doing things without paying attention.	.765
I snack without being aware that I'm eating.	.573
Eigenvalue	6.037
Chronbach's α	.883

Principal Component Analysis, forced into one factor

Appendix C: Sample characteristics

Table C1.

Organization types in category other (in Dutch)

Organization type:	Frequency	Percentage of sample
Advertising	5	1.2
detailhandel	4	1.0
Electronica	5	1.2
Gemeente	10	2.5
ICT dienstverlening	5	1.2
ICT-leverancier	1	.2
ICT, software verko	1	.2
kinderopvang	5	1.2
Overheid (gemeente)	5	1.2
PostNL	5	1.2
Recreatie/Leisure	5	1.2
Retail	5	1.2
Teelt, tuinbouw	5	1.2

Table C2.

Respondents' occupation (in Dutch)

Occupation:	Frequency	Percentage of sample
accountant	1	.2
adm medewerker	1	.2
administracion	1	.2
Administratief assistent	1	.2
Administratief medewerker	6	1.5
Administratief Medewerker	1	.2
administratief medewerker innen	1	.2
Administratief medewerker klant contact centrum afdeling onderhoud	1	.2
administratief medewerkster	1	.2
Administration	1	.2
administration officer	1	.2
Adviseur business service	1	.2
Adviseur Business Service	1	.2
Adviseur Direct marketing	1	.2

Adviseur Direct Marketing	1	.2
Adviseur Informatievoorziening	2	.5
Adviseur pakketten/direct marketing	1	.2
Adviseur VRO	1	.2
Adviseur zakelijke post	1	.2
afwasser	1	.2
All round horeca medewerker	1	.2
Ambtenaar	1	.2
Ambtenaar, beleidsmedewerker	1	.2
Ambulance verpleegkundige	2	.5
ambulanceverpleegkundige	1	.2
Ambulanceverpleegkundige	2	.5
Amdministration supervisor	1	.2
Analist moleculaire biologie	2	.5
ass-accountant	2	.5
Assistent bedrijfs leider	1	.2
Assistent drogist	1	.2
assistent filiaal manager	1	.2
assistent manager/pedagoog	1	.2
Assistent-bedrijfsleider	1	.2
Autoation Engineer	1	.2
Automatin engineer	1	.2
Automation Engineer	1	.2
Bankemployee	1	.2
barmedewerker	1	.2
bediening	7	1.7
Bediening/bar horeca	1	.2
Bediening/Barman	1	.2
Bedieningsmedewerker	1	.2
bedieningsmedewerkster	1	.2
Bedreijsleider	1	.2
Bedrijfsadministrateur	1	.2
belastingadviseur	1	.2
belastingdeurwaarder	1	.2
Beleidsadviseur Sociaal Domein (trainee)	1	.2
Beleidsmedewerker	4	1.0
Beleidsmedewerker Sociale Zaken (Participatiewet, Werk&Inkomen	1	.2
bloembinden	1	.2
bloembindster	1	.2

bloemist	1	.2
Booking and customer service manager	1	.2
Business adviseur	1	.2
Business Service Advisor	1	.2
Business unit manager	1	.2
Businessanalist	1	.2
Casemanager Zekteverzuim	1	.2
Champignonplukster	2	.5
Chauffeur-operator	1	.2
Commercieel manager	1	.2
Commercieel medewerker	1	.2
Compensation & Benefits Specialist	1	.2
Congierge	1	.2
Consultant	4	1.0
consulte op het gastouderbureau en pedagogisch medewerker op het kinderdagverblijf	1	.2
Controler	2	.5
conversiemanager	1	.2
Coordinator	1	.2
coordinator sales support	1	.2
CRS- Desk medewerker	1	.2
Customer service agent	1	.2
Customer service and sales	1	.2
customer success manager	1	.2
dagbestedingscoach	2	.5
Data analyst & reporting	1	.2
Design	1	.2
Design Specialist	1	.2
Designing online media	1	.2
Developer	1	.2
Digital content specialist	1	.2
Directiesecretaris	1	.2
Directievoerder/opzichter	1	.2
director	1	.2
docent	5	1.2
docent + coach	1	.2
docent/roostermaker/zorgcoördinator	1	.2
Dokterassistente	1	.2
Doktersassistente	1	.2
Doktersassistente triagiste	1	.2

Doktersassístente triagiste	1	.2
Dragen	1	.2
Drager	3	.7
Drager, uitvaart Dienstverlening	1	.2
educator	3	.7
Educator	1	.2
educator/marketing	1	.2
Electical engineer	1	.2
Electronic	4	1.0
emerson instruments sells man	1	.2
engineer	1	.2
Executive assistant	1	.2
Expeditie Medewerker	1	.2
Expert Consultant	1	.2
Facility officer + receptioniste	1	.2
Filialmanager	2	.5
Financieel medewerker	2	.5
Foreign trade bachelor	1	.2
Gastheer	1	.2
Gastvrouw	1	.2
Gediplomeerd verkoopmedewerker	1	.2
general teller	2	.5
Groepsleerkracht	1	.2
Helpende niveau 2	1	.2
Horeca medewerkster	1	.2
horecamedewerker	2	.5
HR	1	.2
HR Adviseur	1	.2
HR Assistant	1	.2
HR Business Partner	1	.2
HR Manager	1	.2
HR Medewerkster	1	.2
HR Project mw	1	.2
HR/L&D officer	1	.2
HR/salarisadministrateur/wagenpark	1	.2
hulpkracht restaurant	1	.2
hulpkracht/verkoopmedewerker	1	.2
Human resources	3	.7
ICT	1	.2
ICT beheerder	1	.2

inkoop/admin.	1	.2
instore verkoopmanager, verkoper	1	.2
interieurverzorgster/horeca	1	.2
IT software engineer	1	.2
Jobcoach	3	.7
Jobper	2	.5
Junior Beleidsmedewerker	1	.2
Junior recruitment consultant	1	.2
Junior research consultant	2	.5
Kantinemedewerkster	1	.2
kapster	1	.2
KCC medewerker	1	.2
Kelner/Ober	1	.2
keuken medewerker	1	.2
lead redacteur	1	.2
Leerkracht	4	1.0
Leerkracht basisonderwijs	1	.2
Leerkracht en teammanager	1	.2
Leerlingenadministratie en applicatiebeheer	1	.2
Legal	1	.2
Locatiedirecteur	2	.5
Macheine installation	1	.2
machine designer	2	.5
Machinist	2	.5
Maintenance Planner and Scheduler	1	.2
Managementassistent	1	.2
Managementassistente	1	.2
Manager Compensation & Benefits	1	.2
marketeer	1	.2
Marketing & office manager	1	.2
mechanical engineer	2	.5
medewerker	1	.2
medewerker afdeling innen	1	.2
medewerker afdeling Innen	1	.2
Medewerker CRS	1	.2
medewerker horeca	1	.2
Medewerker horeca projectbureau	1	.2
Medewerker Informatievoorziening	1	.2
Medewerker KCC	1	.2
Medewerker klantcontactcentrum	1	.2

medewerker kledingzaak	1	.2
medewerker planning	1	.2
medewerker primair proces A	1	.2
Medewerker ruimtelijke ontwikkeling	1	.2
Medewerker Ruimtelijke Ontwikkeling & Vergunningen	1	.2
Medewerker sales	1	.2
Medewerker Technische Dienst	1	.2
Medewerker vergunningen	1	.2
Media designer	2	.5
Moleculair biologisch analist	1	.2
Muzikant	2	.5
Muzikant/ management	1	.2
Ober/Bediening	1	.2
Pantrygastvrouw	1	.2
Partnership manager and account	1	.2
pedagogisch medewerker	9	2.2
Pedagogisch medewerker	8	2.0
pedagogisch medewerker/administratief medewerker	1	.2
pedagogisch medewerkster	3	.7
Personal Assistent	1	.2
Physics	1	.2
Plant Technician, Technisch specialist	1	.2
Pluk	1	.2
Plukker	1	.2
Plukster	1	.2
polikliniek assistent	1	.2
polikliniek medewerker	1	.2
polikliniekassistente/dokterassistente	1	.2
portfoliobeheerder	3	.7
Price Planning and competitive analysis	1	.2
Productie Manager	1	.2
productredacteur	1	.2
project coordinator	1	.2
Project Manager Data Retention & Record Keeping	1	.2
Projectleider	1	.2
Projectmanager	2	.5
Projectmedewerker	1	.2
Psychiatrisch verpleegkundige	1	.2
Recruiter	1	.2
Reliability Engineer	1	.2

Remittance teller	1	.2
Research Consultant	1	.2
Riool inspecteur	1	.2
Runner	1	.2
Sale assistant	1	.2
sales	2	.5
sales & MGR	1	.2
Sales & service officer	1	.2
Sales advisor	1	.2
Sales and marketing manager	1	.2
sales engineer	2	.5
Sales medewerker binnendienst	1	.2
Sales support	2	.5
Salesman	1	.2
salesman in textile machinery industry	1	.2
secretaresse	2	.5
Senior Advisor Business Service	1	.2
Senior Consultant	1	.2
Senior Machinist	1	.2
Senior psycholoog NIP	1	.2
Senior SAP Consultant	1	.2
Senior Teller	1	.2
Serveerster	1	.2
Serveester	1	.2
service assistent	1	.2
service coordinator	4	1.0
Seveerster	2	.5
Software architect	1	.2
Specialist	1	.2
Sr. HR Business Partner	1	.2
Stagiaire moleculaire biologie	1	.2
student	1	.2
student/horeca	1	.2
Studente	2	.5
support engineer	3	.7
support medewerker	1	.2
Systeem-netwerkbeheerder	1	.2
Systeembeheerder	1	.2
teacher	5	1.2
Technician	1	.2

Technician molecular biology research	1	.2
technisch medewerker	1	.2
Telefonisch medewerker medische beoordelingen	8	2.0
Toegepaste psycholoog/recruiter	1	.2
Trainee HR	1	.2
Transferfunctionaris	1	.2
Trompetist/Muzikant	1	.2
trossnoeier	1	.2
Verkeerskundige	1	.2
Verkoopmedeweker	1	.2
verkoopmedewerker	3	.7
Verkoopmedewerker	2	.5
verkoopmedewerkster	1	.2
Verkoopmedewerkster	1	.2
verkoopmedwerker	1	.2
verkoopster	1	.2
Verkoper	5	1.2
verkoper (vormgever)	1	.2
verpleegkundige	2	.5
Verpleegkundige	8	2.0
Verpleegkundige in de wijk	1	.2
Verpleegkundige in de wijk/thuiszorg	1	.2
Verpleegkundige MBO	1	.2
Verpleegkundige v/d wijk	1	.2
Vulploedmedewerker	1	.2
VX Designer	1	.2
was Team leidster op een inpakafd.	1	.2
Wegbeheerder	1	.2
Wijkziekenverzorgster	1	.2
winkelmedenerken	1	.2
Winkelmedewerker	1	.2
woonbegeleider welzijn	1	.2
woonzorgbegeleider en mimakker	1	.2
woonzorgbegeleider welzijn	1	.2
Work office manager	1	.2
z verpleegkundige	1	.2