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Passing on beneficial job crafting behaviors

A study examining the relationship between leaders modeling beneficial job crafting, beneficial job crafting performed by employees, work performance and work engagement.

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Abstract

This cross-sectional study tested whether beneficial job crafting modeled by leaders relates to more work engagement and work performance of employees through beneficial job crafting performed by employees. 209 participants were recruited via a convenience sample through social media (LinkedIn and Facebook) and the network of a HR consultancy agency that is active in the Life sciences and Healthcare industry. To analyze the data a standard multiple regression and a mediation analysis using the PROCESS-tool were performed. The results showed that beneficial job crafting performed by leaders related to beneficial job crafting performed by employees. Furthermore, increasing structural resources and increasing challenging demands related to more work engagement and work performance. In addition, increasing social resources had both positive and negative effects on work engagement and work performance. Furthermore, some mediation effects were found for beneficial job crafting performed by employees in the association between leaders modeling beneficial job crafting and the work outcomes, work engagement and work performance. This study contributes to the existing literature, as it is among the first to provide insights into the role of beneficial job crafting performed by employees in the association between leaders modeling beneficial job crafting and work outcomes of employees. These results may encourage leaders to start modeling beneficial job crafting, in order to increase the beneficial job crafting behaviors of their employees and to influence their work outcomes.

Key words: Leadership modeling, beneficial job crafting, work engagement and work performance.

Introduction

Nowadays we live in a more dynamic and decentralized working world (Crant, 2000), often with less surveillance from the management (Frese, Fay, Hilburger, Leng & Tag, 1997). This has led to more individual- career management and responsibility, with organizations moving away from top-down career management to more supportive and development-oriented (Segers & Inceoglu, 2012). The importance for employees to take initiative and act proactive increases and therefore becomes a critical determinant of organizational success and effectiveness (Crant, 2000; Frese et al., 1997; Tims, Bakker & Derks, 2012). Proactive behavior in the workplace is defined as actively taking initiative to improve circumstances and create new ones (Crant, 2000).

A specific form of proactive behavior is 'job crafting', Thus, job crafting is a way of improving someone's person-job fit and work motivation (Tims et al., 2012). The review article by Wang, Demerouti and Bakker (2016) shows that beneficial job crafting (i.e., increasing resources and challenges) is often linked to positive individual- and work outcomes, such as having more work engagement and better work performance. However, this research article also shows that there is a harmful form of job crafting (i.e., reducing demands) that is often linked to negative individual- and work outcomes, such as exhaustion and lower work performance (Wang et al., 2016).

The motivation for employees to start with beneficial job crafting can be fostered if the environment gives the perceived opportunity to craft (Wrzesniewski & Dutton, 2001). People learn from others in their environment through observation, imitation and modeling (Bandura & Walters, 1977). Thus, when leaders start modeling beneficial job crafting, this could give employees the perceived opportunity to craft themselves (Bakker, Rodríguez-Muñoz & Sanz Vergel, 2016). Following this reasoning the current study argues that modeling beneficial job

crafting by leaders may have an indirect effect on the work engagement and work performance of their employees.

As shown in the review article by Wang and Chen (2020) research has been conducted into the relationship between leadership behavior/styles and beneficial job crafting. However, little research has been found on the relationship between leadership modeling behaviors and beneficial job crafting. In addition, according to current believes, no research has yet been conducted on the specific link between leaders modeling beneficial job crafting, beneficial job crafting performed by employees, work engagement and work performance. Therefore, this study is a contribution to the existing literature. Furthermore, the current study has practical implications because insights of this study may encourage leaders to model beneficial forms of job crafting in their company, which may lead to more beneficial job crafting performed by employees. Beneficial job crafting performed by employees may in turn lead to more work engagement and work performance, which is beneficial for the organization and their employees (Wang et al., 2016).

Job crafting

Wrzesniewski & Dutton (2001) defined job crafting as: “The physical and cognitive changes individuals make in the task or relational boundaries of their work. Thus, job crafting is an action, and those who undertake it are job crafters” (p.179). Physically changing these task boundaries means adjusting the content or amount of tasks people engage in. On the other hand, cognitively changing the task boundaries means adjusting how people perceive their job. Lastly, changing the relational boundaries implies adjusting how and with whom people interact in their social environment during the job (Wrzesniewski & Dutton, 2001). According to Wrzesniewski and Dutton (2001) the motivation to craft arises, because it gives employees control over their jobs, it creates positives self-images at work, and it fulfills the need for human

connection. Job crafting is therefore seen as a bottom-up process, in which employees redesign their work themselves without a manager that is directing changes from above (Berg, Dutton & Wrzesniewski, 2013).

In this study, job crafting is conceptualized in four categories as in the validated Job Crafting Scale developed by Tims et al. (2012). These categories are: (1) increasing structural job resources (e.g., developing capabilities); (2) increasing social job resources (e.g., receiving advice and/or support); (3) increasing challenging job demands (e.g., take on extra activities); and (4) decreasing hindering job demands (e.g., minimize intense or emotional activities) (Tims et al., 2012). These categories are based on the JD-R model that proposes that job demands, and job resources need to be balanced to prevent a decrease in well-being and disengagement (Demerouti, Bakker, Nachreiner & Schaufeli, 2001). This is described in two underlying processes. The first process is called the health impairment process. This process states that when jobs have a poor design or too many demands, it can lead to the depletion of available resources. When the available resources are depleted, it can lead to exhaustion and health problems for employees. Furthermore, the second process is called the motivational process. This process states that job resources can have an intrinsic and extrinsic motivational role. Job resources have an intrinsically motivating role because they promote growth, learning and development of employees. In addition, job resources have an extrinsically motivating role as they help achieving work goals. Therefore, having job resources will lead to high work engagement, low cynicism and good performance (Bakker & Demerouti, 2007). In these processes, job demands are defined as job characteristics that require effort and are associated with physical and psychological costs, whereas job resources are defined as aspects of the job that help to reach goals, encourage development and lower job demands and the related costs (Demerouti et al., 2001).

The proactive behavior of redesigning job demands and job resources that comes with job crafting is often linked to better individual well-being (Tims, Bakker & Derks, 2013). Furthermore, job crafting is often linked to performance indicators that predict organizational effectiveness (Tims et al., 2012). However, job crafting does not always have positive effects for the individual and organization, it can also have effects that are harmful. The effects can be harmful when the crafting is not in line with the organizational goals, if it has negative side effects or when there is not enough room to craft (Berg, Dutton & Wrzesniewski, 2008). In the review article by Wang et al. (2016) is stated that increasing resources and challenges are beneficial forms of job crafting leading to positive effects, and that reducing demands is a harmful form of job crafting leading to negative effects. Various positive effects of beneficial job crafting that have been found are work engagement, satisfaction, resilience, better work identity and work performance (Berg et al., 2008; Rudolph, Katz, Lavigne & Zacher, 2017). Furthermore, various negative effects of harmful job crafting that have been found are exhaustion, job strain, less work engagement and lower work performance (Rudolph et al., 2017; Petrou, Demerouti & Schaufeli, 2015).

Modeling behaviors

The decisions and behavior of leaders in the work environment can have a significant impact on multiple employees (Berg et al., 2008; Kim & Beehr, 2018). According to Parker and Wu (2014) leaders have an important role in the work environment, as they can foster or decrease an employee's motivation to act in a proactive way. So, in order to create a beneficial job crafting environment for the organization, it is important that leaders show how to craft jobs in an acceptable way (Berg et al., 2008).

The social learning theory (SLT) states that people learn from others in their environment and that this goes via observation, imitation and modeling (Bandura & Walters,

1977). The observed people are called models and the learning process is called modeling (Nabavi, 2012). The modeling process describes four phases of modeling. First, there is the attention phase were a person must pay attention to the behavior of the model. Second, there is the retention phase were the observed behavior needs to be remembered. Third, there is the reproduction phase were the person is able to reproduce the behavior of the observed model. Finally, there is the motivation phase were the person is motivated to keep reproducing the learned behavior (Bandura, 1969). Following this reasoning, Zhou (2003) has shown that employees became more creative when there were creative co-workers present in the workplace.

Employees often adopt behavior from their co-workers when they see it has rewarding consequences and it is appropriated behavior for the workplace (Bakker et al., 2016; Bandura & Walters, 1977). In a study of Peeters, Arts and Demerouti (2016) employees were adopting the behavior of 'increasing challenges' from their co-workers, because it was expected to be rewarding behavior. Also, seeking feedback (i.e., a form of increasing resources) is shown to be adopted, and learned observationally through modeling in the workplace (Ashford, Blatt & VandeWalle, 2003). In a study by Falkenberg & Herremans (1995) is shown that in the workplace, leaders are role models in showing rewarding and norm behavior. Based on this finding and Bandura's social learning theory (SLT) it is argued in the current study that leaders modeling beneficial job crafting behaviors will lead to more beneficial job crafting behavior performed by employees. Therefore, the following hypothesis is formulated:

H1: Leaders modeling beneficial job crafting behaviors is positive related to beneficial job crafting behaviors performed by employees (i.e., increasing resources and challenges).

Beneficial job crafting and work engagement

In the literature, beneficial forms of job crafting are often linked to better work engagement (Petrou et al., 2012; Rudolph et al., 2017; Wang et al., 2016). According to Schaufeli, Salanova, González-Romá and Bakker (2002) work engagement can be defined as: "A positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (p.74). Vigor can be explained as having a lot of energy and mental resilience during work, wanting to invest into work, and being persistent even when faced with difficulties. Furthermore, dedication can be explained as having a feeling of importance and experiencing enthusiasm, inspiration, pride and challenge during one's work. Lastly, absorption can be explained as being completely absorbed in one's work, whereby one loses track of time and has a hard time detaching from work (Schaufeli et al., 2002).

The relationship between beneficial forms of job crafting and work engagement can be explained trough a better person-job fit. Chen, Yen and Tsai (2014) found that having a better person-job fit due to job crafting leads to more work engagement. Therefore, job crafting is positively related to work engagement. A study by Petrou, Demerouti and Schaufeli (2018) found that increasing resources lead to more work engagement. In addition, Tims, Bakker, Derks and Van Rhenen (2013) found that increasing structural resources was linked to more vigor, dedication and absorption, increasing social resources was linked to more dedication, and that increasing challenges was linked to more vigor and absorption. Based on the above findings it is argued in the current study that beneficial job crafting is positively related to work engagement. Therefore, the following hypothesis is formulated:

H2a: Beneficial job crafting performed by employees is positively related to work engagement.

Beneficial job crafting and work performance

In the literature beneficial forms of job crafting are also often linked to more work performance (Demerouti, Bakker & Halbesleben, 2015; Wang et al., 2016). Work performance is defined as the actions, behavior and outcomes performed by employees, which are linked with and contribute to the goals of the organization (Viswesvaran & Ones, 2000). According to the conceptual framework of Borman and Motowidlo (1993) work performance can be divided into two constructs: task performance and contextual performance. Task performance is often defined as the skill by which central job tasks are performed. In addition, contextual performance is often defined as the behavior of employees that strengthen the organizational, social and psychological environment (Borman & Motowidlo, 1993; Goodman & Syvantek, 1999).

The relationship between beneficial forms of job crafting and work performance can also be explained trough a better person-job fit. When employees craft their jobs in a beneficial way, this will lead to an improved person-job fit (Tims, Derks & Bakker, 2016). This improved person-job fit, in turn, will lead to more work performance (Kristof-Brown, Zimmerman & Johnson, 2005). Therefore, beneficial job crafting is positively related to work performance. In a longitudinal study by Petrou et al. (2015) found that increasing resources enhanced task performance. In addition, Weseler and Niessen (2016) found that expanding tasks (i.e., a form of increasing challenges) also resulted in more task performance. Furthermore, Rudolph et al. (2017) found that overall job crafting related positively to contextual performance. Based on these findings it is argued in the current study that performing beneficial job crafting is positively related to work performance. Therefore, the following hypothesis is formulated:

H2b: Beneficial job crafting performed by employees is positively related to work performance (i.e., task performance and contextual performance).

Mediation

The above findings show that leaders modeling beneficial job crafting is positively related to beneficial job crafting performed by employees (Ashford et al., 2003; Peeters et al., 2016). Furthermore, the above findings show that performing beneficial job crafting is also positively related to work engagement (Petrou et al., 2018; Tims et al., 2013). In addition, the above findings show that performing beneficial job crafting is positively related to work performance (Petrou et al., 2015; Rudolph et al., 2017; Weseler & Niessen, 2016). Following this reasoning, it is argued that the relationship between leaders modeling job crafting, and the work outcomes work engagement and work performance is fully mediated through performing beneficial job crafting by employees themselves. Therefore, the final hypotheses are formulated:

H3a: Beneficial job crafting performed by employees is a mediator for the relationship between leaders modeling beneficial job crafting behaviors and work engagement.

H3b: Beneficial job crafting performed by employees is a mediator for the relationship between leaders modeling beneficial job crafting behaviors and work performance.

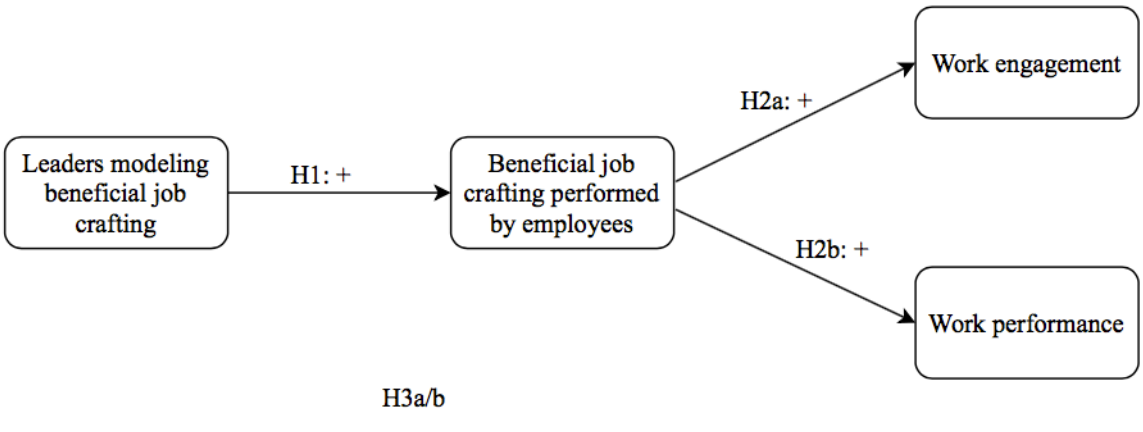

Figure 1. The relationship between leaders modeling beneficial job crafting, beneficial job crafting performed by employees, work engagement and work performance.

Method

Design & Participants

The design of this study was cross-sectional. G-power recommended using a minimum of 202 participants for studying main effects (effect size f² .07, power .80, alpha .05). This effect size was based on a small to moderate effect size (Cohen, 2013). After removing participants who had not fully completed the questionnaire and/or had no leader, a total of 209 participants remained for further analysis. The mean age of the participants was *M* = 39.32 years (*SD* = 14.13). Furthermore, *N* = 87 (41.6%) of the participants were male and *N* = 122 (58.4%) of the participants were female. Furthermore, most participants completed a WO (63.2%) or HBO (28.2%) study. More descriptive data can be found in Table 1.

Table 1
Educational level, function group and Branche of the participants (*N* = 209).

Category	Options	% of the participants
Educational Level	MAVO, LBO, VMBO	1.0
	HAVO	0.5
	VWO	1.0
	MBO	6.2
	HBO	28.2
	WO	63.2
Function group	QA/ regulatory affairs	5.3
	Technical	2.9
	Sales/ Marketing	13.9
	Medical expert	5.7
	IT	2.9
	HRM	12.9
	Purchase	1.0
	Finance	3.3
	Administrative	4.8
	Planning/ logistic	1.9
	R&D	1.4
	QC/ laboratory	1.4
	Management/ board	13.9

	Other	28.7
Branche	Food industry	3.3
	Pharmacy/ biotechnology industry	17.2
	Industrial industry	5.3
	Healthcare	14.8
	Medical devices/ laboratorial supplies	4.8
	Other	54.5

Procedure

The participants have been recruited via a convenience sample through social media (LinkedIn and Facebook) and the network of Derks & Derks, which is a HR consultancy agency aimed at mediating highly educated professionals in the Life Science and Healthcare industry. The services of Derks & Derks include Recruitment, Selection, Secondment & Interim, Talent Development and HR Research. On April 8, the link of the online questionnaire was distributed by email to the database of Derks & Derks. After two weeks a reminder was sent to this group. In addition, the link of the online questionnaire was distributed via social media channels and some participants were personally approached by the researcher of this study. After four weeks the online questionnaire was closed. Ultimately, 68 (32.5%) participants were recruited via the network of Derks & Derks, 41 (19.6%) participants were recruited through social media, 82 (39.2) participants were personally approached, and 18 (8.6%) participants were recruited in another way.

At the start of the questionnaire, participants have been briefly instructed on the purpose of the questionnaire and have been informed that their data will be analyzed anonymously. All participants participated on a voluntary basis and needed to read an informed consent before proceeding with the questionnaire. Furthermore, the questionnaire was conducted in a natural setting where there was no control over external factors. Ethical approval for this study has been obtained via the Student Ethics Review & Registration Site (UU-SER) developed by Utrecht University (File number 21-1222).

Measures

The measured variables among other variables in this study are leaders modeling beneficial job crafting, beneficial job crafting performed by employees, work engagement and work performance.

Leaders modeling beneficial job crafting. To measure the first variable, leaders modeling beneficial job crafting, participants filled in a scale about the behavior of their leader, which consisted of 21 items and was based on the validated Job Crafting Scale for employees by Tims et al. (2012) (see Appendix 2). From this list only the three dimensions consisting of 15 items that form the construct beneficial job crafting (i.e., increasing resources and challenges) were used to test the hypotheses. The dimension, decreasing hindering demands that forms the construct harmful job crafting was excluded from the analyses. The first dimension, increasing structural job resources, consisted of 5 items (α= .85, e.g. "My leader tries to learn new things at work). The second dimension, increasing social job resources, consisted of 5 items (α= .86, e.g. "My leader asks colleagues for advice"). The third dimension, increasing challenging job demands, consisted of 5 items (α=. 86, e.g. "If there are new developments, my leader is one of the first to learn about them and try them out"). All items were scored on a 5-point Likert scale (1= never; 5= very often). A principal component analysis (PCA) using Direct Oblimin Rotation was used to examine the factor structure of the whole list. The outcome of this analysis showed that, as expected, four factors had an eigenvalue above Kaiser's criteria of 1 (explaining 63.06% variance). However, item 1, 2 and 3 of the dimension increasing structural resources and item 10 of the dimension decreasing hindering demands loaded double on two factors. Because item 5 and 11 have been removed from the job crafting scale for employees after doing a PCA, this was also necessary for the job crafting scale for leaders to keep the scales as parallel as possible. After removing item 5 from the dimension increasing structural resources and item 11 from the dimension decreasing hindering demands

the explained variance increased to 66.34%. Furthermore, all the items now loaded significantly on the intended factor. The reliability of the dimension increasing structural resources increased to α= .88.

Beneficial job crafting performed by employees. To measure the second variable, beneficial job crafting performed by employees, the Job Crafting Scale was used, which consisted of 21 items (Tims et al., 2012). From this list, only the three dimensions consisting of 15 items that form the construct beneficial job crafting (i.e., increasing resources and challenges) were used to test the hypotheses. The dimension, decreasing hindering demands, that forms the construct harmful job crafting was excluded from the analyses. The first dimension, increasing structural job resources, consisted of 5 items (α= .79, e.g. "I try to learn new things at work). The second dimension, increasing social job resources, consisted of 5 items (α= .78, e.g. "I ask colleagues for advice"). The third dimension, increasing challenging job demands, consisted of 5 items (α= .77, e.g. "If there are new developments, I am one of the first to learn about them and try them out"). All items were scored on a 5-point Likert scale (1= never; 5= very often). A principal component analysis (PCA) using Direct Oblimin Rotation was used to examine the factor structure of the whole Job Crafting Scale. The outcome showed that five factors had an eigenvalue above Kaiser's criteria of 1 (explaining 58.25% variance). However, this was contrary to the expected four factor structure. Therefore, another PCA was executed and forced on the expected four factors (explaining 53.38% variance). Except for item 5 of the dimension increasing structural resources and item 11 of the dimension decreasing hindering demands all the items loaded on the intended factor. After removing these two items, the explained variance increased to 56.10%. Item 6 of the dimension decreasing hindering demands loaded double on two factors, but after removing item 5 and 11 also item 6 loaded significantly on its intended factor with a loading of .444. The reliability of the dimension increasing structural resources increased to α= .82.

Work engagement. To measure the third variable, work engagement, the shortened validated version of the Utrecht Work Engagement Scale was used, which consisted of three subscales and 9 items (Schaufeli, Bakker, & Salanova, 2006). The first subscale, absorption, consisted of 3 items (***α***= .81, e.g. "I feel happy when I am working intensely). The second subscale, vigor, consisted of 3 items (***α***= .86, e.g. "At my job, I feel strong and vigorous). The third subscale, dedication, also consisted of 3 items (***α***= .90, e.g. "I am enthusiastic about my job"). All items were scored on a 7-point Likert scale (0= never; 6= always). The reliability of the overall scale was ***α***= .93.

Work performance. To measure the fourth variable, work performance, the Performance scale was used, which consisted of two subscales and 16 items (Goodman & Syvantek, 1999). The first subscale, task performance, consisted of 9 items (***α***= .79, e.g. "You achieve the objectives of your job"). The second subscale, contextual performance, consisted of 7 items (***α***= .71, e.g. "You assist your colleagues with their duties"). All items were scored on a 4-point Likert scale (1= strongly disagree; 4= very strongly agree).

Statistical analysis

This study used the statistical program IBM SPSS 27 to analyze the data. Hypotheses 1 and 2 were tested with standard multiple regression analyses using bootstrapping (Field, 2018). Hypothesis 3 was tested using mediation analyses with the PROCESS-tool of Hayes (Hayes, 2013). Before starting with the analyses, all the assumptions, concerning linearity, normality, homoscedasticity, outliers and multicollinearity were checked.

Results

Descriptive data

In Table 2, all means (M), standard deviations (SD) and inter-correlations of the variables are shown. What stands out is that not all correlations between the dimensions were in the expected direction. Increasing structural resources by leaders and increasing social resources by leaders did not significantly correlate with increasing challenging demands by employees. Furthermore, increasing structural resources by leaders and increasing social resources by leaders did not significantly correlate with contextual and task performance. Also, increasing challenging demands by leaders did not significantly correlate with task performance. Last, increasing social resources by employees did not significantly correlate to work engagement and task performance. Next to these correlations, all the dimensions in Table 2 correlated in the expected direction. Relevant to Hypothesis 1, as expected, most beneficial job crafting dimensions performed by leaders correlated significantly with the beneficial job crafting dimensions performed by employees. Furthermore, relevant to Hypothesis 2, as expected, most beneficial job crafting dimensions performed by employees correlated significantly with work engagement, task performance and contextual performance.

Table 2

Descriptive Statistics and Correlations (*N* = 209).

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
1. Increasing structural resources leaders	3.13	0.87	-	.62**	.60**	.26**	.50**	.12	.20**	.02	.09
2. Increasing social resources leaders	2.44	0.77		-	.47**	.20**	.48**	.06	.15*	-.02	.11
3. Increasing challenging demands leaders	3.04	0.91			-	.22**	.45**	.26**	.18**	<-.01	.14*
4. Increasing structural resources employees	3.88	0.70				-	.36**	.56**	.32**	.29**	.37**
5. Increasing social resources employees	2.69	0.74					-	.33**	<-.01	-.05	.15*
6. Increasing challenging demands employees	3.12	0.78						-	.27**	.30**	.51**
7. Work engagement	4.31	1.06							-	24**	.30**
8. Task performance	3.22	0.38								-	.61**
9. Contextual performance	3.19	0.36									-

Note. * p < .05 ** p < .01

The effect of leadership modeling (Hypothesis 1)

To test the association between leaders modeling beneficial job crafting and beneficial job crafting performed by employees, standard multiple regression analyses were performed. In combination the dimensions of beneficial job crafting performed by leaders (i.e., increasing resources and challenges) explained 7% of the variance in increasing structural resources performed by employees, $R^2 = .07$, $F\,(3, 205) = 5.43$, $p < .001$. However, none of the dimensions made a significant unique contribution to the model (see Table 3).

Furthermore, in combination the dimensions of beneficial job crafting performed by leaders (i.e., increasing resources and challenges) explained 32% of the variance in increasing social resources performed by employees, $R^2 = .32$, $F\,(3, 205) = 31.57$, $p < .001$. In addition, all the dimensions made a significant unique contribution to the model (see Table 4).

Furthermore, in combination the dimensions of beneficial job crafting performed by leaders (i.e., increasing resources and challenges) explained 7% of the variance in increasing challenging demands performed by employees, $R^2 = .07$, $F\,(3, 205) = 5.21$, $p < .002$. In addition, increasing challenging demands by employees made a significant unique contribution to the model (see Table 5).

As expected, the combined models were significant, and the matching independent dimension in every model had the strongest unique contribution. Although these unique contributions were not significant in every analysis, it can be concluded that Hypothesis 1 is generally supported by the results. This implies that beneficial job crafting performed by leaders was positively associated with beneficial job crafting performed by employees.

Table 3

Results of the Standard Regression analyses regarding the effects of each predictor in the Regression Model predicting increasing structural resources by employees.

Variable	*b*	*β*	*p*	95% CI
Increasing structural resources leaders	.14	.17	.07	[-0.013, 0.291]
Increasing social resources leaders	.04	.05	.59	[-0.113, 0.197]
Increasing challenging demands leaders	.07	.09	.28	[-0.058, 0.201]

Note. $N = 209$. CI = Confidence Interval, $^{*}p < .05$ $^{**}p < .01$

Table 4

Results of the Standard Regression analyses regarding the effects of each predictor in the Regression Model predicting increasing social resources by employees.

Variable	*b*	*β*	*p*	95% CI
Increasing structural resources leaders	.20	.23	<.01**	[0.057, 0.333]
Increasing social resources leaders	.23	.24	<.01**	[0.091, 0.373]
Increasing challenging demands leaders	.16	.20	<.01**	[0.043, 0.278]

Note. $N = 209$. CI = Confidence Interval, $^{*}p < .05$ $^{**}p < .01$

Table 5

Results of the Standard Regression analyses regarding the effects of each predictor in the Regression Model predicting increasing challenging demands by employees.

Variable	*b*	*β*	*p*	95% CI
Increasing structural resources leaders	-.02	-.02	.81	[-0.191, 0.150]
Increasing social resources leaders	-.07	-.07	.42	[-0.245, 0.103]
Increasing challenging demands leaders	.26	.30	<.01**	[0.116, 0.406]

Note. $N = 209$. CI = Confidence Interval, $^{*}p < .05$ $^{**}p < .01$

Beneficial job crafting and work engagement (Hypothesis 2a)

To test the association between beneficial job crafting performed by employees and work engagement, a standard multiple regression analysis was performed. In combination the dimensions of beneficial job crafting performed by employees (i.e., increasing resources and challenges) explained 13% of the variance in work engagement, $R^2 = .13$, $F(3, 205) = 10.59$, $p < .001$. In addition, increasing structural resources by employees and increasing challenging

demands by employees made a significant positive unique contribution to the model (see Table 6). However, increasing social resources made a significant negative unique contribution to the model (see Table 6). Therefore, Hypothesis 2a is partially supported. This means that increasing structural resources by employees and increasing challenging demands by employees were positively associated with work engagement.

Table 6
Results of the Standard Regression analyses regarding the effects of each predictor in the Regression Model predicting work engagement.

Variable	*b*	*β*	*p*	95% CI
Increasing structural resources employees	.42	.28	.03*	[0.135, 0.687]
Increasing social resources employees	-.22	-.15	.02*	[-0.420, -0.011]
Increasing challenging demands employees	.22	.65	.05*	[0.012, 0.455]

Note. $N = 209$. CI = Confidence Interval, $^{*}p < .05$ $^{**}p < .01$

Beneficial job crafting and work performance (Hypothesis 2b)

To test the association between job crafting performed by employees and work performance, standard multiple regression analyses were performed. In combination the dimensions of beneficial job crafting performed by employees (i.e., increasing resources and challenges) explained 15% of the variance in task performance, $R^2 = .15$, $F\ (3, 205) = 11.94$, $p < .001$. In addition, increasing structural resources by employees and increasing challenging demands by employees made a significant positive unique contribution to the model (see Table 7). However, increasing social resources made a significant negative unique contribution to the model (see Table 7).

Furthermore, in combination the dimensions of beneficial job crafting performed by employees (i.e., increasing resources and challenges) explained 28% of the variance in task performance, $R^2 = .28$, $F\ (3, 205) = 25.95$, $p < .001$. From Table 2 can be derived that increasing structural resources performed by employees, increasing social resources performed by employees and increasing challenging demands performed by employees all correlated

significantly with contextual performance. However, only increasing challenging demands by employees made a significant unique contribution to the model (see Table 8). Therefore, based on the results, Hypothesis 2b is largely supported. This means that increasing structural resources by employees and increasing challenging demands by employees were positively associated with task performance. Furthermore, increasing structural resources performed by employees, increasing social resources performed by employees and increasing challenging demands performed by employees were all positively associated with contextual performance.

Table 7

Results of the Standard Regression analyses regarding the effects of each predictor in the Regression Model predicting task performance.

Variable	*b*	*β*	*p*	95% CI
Increasing structural resources employees	.12	.22	<.01**	[0.036, 0.209]
Increasing social resources employees	-.11	-.21	<.01**	[-0.182, -0.039]
Increasing challenging demands employees	.12	.25	<.01**	[0.044, 0.196]

Note. $N = 209$. CI = Confidence Interval, * $p < .05$ ** $p < .01$

Table 8

Results of the Standard Regression analyses regarding the effects of each predictor in the Regression Model predicting contextual performance.

Variable	*b*	*β*	*p*	95% CI
Increasing structural resources employees	.07	.14	.07	[-0.005, 0.144]
Increasing social resources employees	-.02	-.04	.50	[-0.083, 0.040]
Increasing challenging demands employees	.21	.45	<.01**	[0.141, 0.273]

Note. $N = 209$. CI = Confidence Interval, * $p < .05$ ** $p < .01$

Mediating role of beneficial job crafting performed by employees (Hypothesis 3a & 3b)

Effect on work engagement (Hypothesis 3a). To test if beneficial job crafting dimensions performed by employees mediate the association between leaders modeling beneficial job crafting and work engagement the PROCESS macro tool was used (Hayes, 2013). For the association between increasing structural resources by leaders and work engagement,

an indirect effect was found for increasing structural resources by employees (*b*=.08, 95% CI [0.018, 0.151], Appendix 1, Table 9) and increasing social resources by employees (*b*=-.17, 95% CI [-0.278, -0.075], Appendix 1, Table 9), but not for increasing challenging demands by employees (see Appendix 1, Table 9). In addition, a direct effect was found for the association between increasing structural resources by leaders and work engagement (*b*=.31, *p* <.01, Appendix 1, Table 9). Therefore, contrary to the expectations partial mediation was present in this association.

Furthermore, for the association between increasing social resources by leaders and work engagement, an indirect effect was found for increasing structural resources by employees (*b*=.07, 95% CI [0.015, 0.141], Appendix 1, Table 10) and increasing social resources by employees (*b*=-.17, 95% CI [-0.265, -0.078], Appendix 1, Table 10), but not for increasing challenging demands by employees (see Appendix 1, Table 10). In addition, a direct effect was found for the association between increasing social resources by leaders and work engagement (*b*=.28, *p* <.01, Table 10). Therefore, contrary to the expectations partial mediation was present in this association.

Furthermore, for the association between increasing challenging demands by leaders and work engagement, an indirect effect was found for the association between increasing structural resources by employees (*b*=.07, 95% CI [0.018, 0.142], Appendix 1, Table 11) and increasing social resources by employees (*b*=-.12, 95% CI [-0.204, -0.044], Appendix 1, Table 11), but not for increasing challenging demands by employees (see Appendix 1, Table 11). In addition, a direct effect was found for the association between increasing challenging demands by leaders and work engagement (*b*=.23, *p* <.01, Appendix 1, Table 11). Therefore, contrary to the expectations partial mediation was present in this association.

Based on the fact that there were no full mediation effects and that not all indirect effects were significant as expected, Hypothesis 3a is partially supported.

Effect on task performance (Hypothesis 3b). To measure if beneficial job crafting dimensions performed by employees mediate the association between leaders modeling beneficial job crafting and work performance (i.e., task performance and contextual performance) the PROCESS macro tool was used (Hayes, 2013). For the association between increasing structural resources by leaders and task performance, an indirect effect was found for increasing structural resources by employees (*b*=.02, 95% CI [0.006, 0.048], Appendix 1, Table 12) and increasing social resources by employees (*b*=-.05, 95% CI [-0.088, -0.016], Appendix 1, Table 12), but not for increasing challenging demands by employees (see Appendix 1, Table 12). In addition, no direct effect was found for the association between increasing structural resources by leaders and task performance. Therefore, as expected, full mediation was present in this association.

Furthermore, for the association between increasing social resources by leaders and task performance, an indirect effect was found for increasing structural resources by employees (*b*=.02, 95% CI [0.003, 0.044], Appendix 1, Table 13) and increasing social resources by employees (*b*=-.05, 95% CI [-0.100, -0.015], Appendix 1, Table 13), but not for increasing challenging demands by employees (see Appendix 1, Table 13). In addition, no direct effect was found for the association between increasing structural resources by leaders and task performance. Therefore, as expected, full mediation was present in this association.

Furthermore, for the association between increasing challenging demands by leaders and task performance, an indirect effect was found for increasing structural resources by employees (*b*=.02, 95% CI [0.004, 0.042], Appendix 1, Table 14), increasing social resources by employees (*b*=-.04, 95% CI, [-0.070, -0.009], Appendix 1, Table 14) and increasing challenging demands by employees (*b*=.03, 95% CI [0.007, 0.054], Appendix 1, Table 14). In addition, no direct effect was found for the association between increasing structural resources

by leaders and task performance. Therefore, as expected, full mediation was present in this association.

Based on the fact that, as expected, full mediation effects were found in the associations, but contrary to the expectations, not all indirect effects were significant, this part of Hypothesis 3b is partially supported.

Effect on contextual performance (Hypothesis 3b). Contrary to the expectations no indirect effects were found for the association between increasing structural resources by leaders and contextual performance (see Appendix 1, Table, 15). In addition, no direct effect was found for the association between increasing structural resources by leaders and contextual performance (see Appendix 1, Table 15). Therefore, there was no mediation present in this association.

Furthermore, contrary to the expectations no indirect effects were found for the association between increasing social resources by leaders and contextual performance (see Appendix 1, Table 16). In addition, no direct effect was found for the association between increasing structural resources by leaders and contextual performance (see Appendix 1, Table 16). Therefore, there was no mediation present in this association.

Furthermore, for the association between increasing challenging demands by leaders and contextual performance, a total indirect effect of the combined dimensions was found (*b*=.05, 95% CI [0.012, 0.089], Appendix 1, Table 17) and an indirect effect was found for increasing challenging demands by employees (*b*=.05, 95% CI [0.019, 0.077], Appendix 1, Table 17), but not for increasing structural resources by employees and increasing social resources by employees (see Appendix 1, Table 17). In addition, no direct effect was found for the association between increasing challenging demands by leaders and contextual performance (see Appendix 1, Table 17). Therefore, as expected full mediation was present in this association.

Based on the fact that there were found no mediation effects for the association between the dimensions, increasing structural resources by leaders, increasing social resources by leaders and contextual performance and not all the indirect effects were significant as expected, Hypothesis 3b is partially supported.

Discussion

The aim of this study was to investigate whether modeling beneficial job crafting by leaders relates to more beneficial job crafting by employees, which in turn relates to more work engagement and work performance of the employees. This study contributes to the existing literature, as it is among the first to provide insights into the role of beneficial job crafting performed by employees in the association between leaders modeling beneficial job crafting and work outcomes of employees. The associations in this study have been examined with a total of 209 participants, recruited via social media and the network of a HR consultancy agency that is active in the Life sciences and Healthcare industry.

The effect of leadership modeling

As expected, the combined beneficial job crafting dimensions performed by leaders were positively associated with the beneficial job crafting dimensions performed by employees. However, not every individual beneficial job crafting dimension performed by leaders had a unique contribution in the model. Nevertheless, it was striking that in each model, the beneficial job crafting dimension performed by leaders that matched with the beneficial job crafting dimension performed by employees had the strongest association. The positive associations between beneficial job crafting performed by leaders and beneficial job crafting performed by employees can be explained by the fact that people learn from others in their environment through observation, imitation and modeling (Bandura & Walters, 1977). Thus, when leaders start modeling beneficial job crafting this could give employees the perceived opportunity to

craft themselves (Bakker et al., 2016). In addition, according to Parker and Wu (2014) leaders have an important role in the work environment, as they can foster or decrease an employee's motivation to act in a proactive way. Therefore, leaders may encourage their employees to craft their job in a beneficial way, when they start performing it themselves. Furthermore, according to (Bandura, 1969) people will reproduce the behavior that the observed model actually performs. This may be the reason that the matching dimension in every model had the strongest association and not every individual beneficial job crafting dimension performed by leaders was associated with every beneficial job crafting dimension performed by employees. Taken together, these findings imply that it is relevant for leaders to start modeling beneficial job crafting to ensure that their employees engage in the same beneficial job crafting behavior as themselves. Therefore, in order to create a beneficial job crafting environment for the organization, it is important that leaders show their employees how to craft jobs in a beneficial manner (Berg et al., 2008).

Beneficial job crafting and work engagement

As expected, increasing structural resources performed by employees and increasing challenging demands performed by employees were positively associated with work engagement. These positive associations can be explained by the fact that having a better person-job fit due to job crafting leads to more work engagement (Chen et al., 2014). In addition, these positive associations are in accordance with previous research (Petrou et al., 2012; Petrou et al., 2018; Rudolph et al., 2017; Tims et al., 2013). These results imply that increasing structural resources and increasing challenging demands relate to more work engagement. Contrary to the expectations, increasing social resources performed by employees was negatively associated with work engagement. Increasing social resources mainly consists out of asking for feedback, advice and support (Tims et al., 2012). The negative association can therefore be explained by the fact that in the literature mixed findings have been found for

feedback on performance (van Emmerik, Bakker & Euwema, 2008). According to van Emmerik et al. (2008) getting unfavorable feedback can lead to emotional exhaustion. In addition, emotional exhaustion, cynicism and reduced professional efficacy are the dimensions of burnout and are found to be negatively associated with work engagement (Schaufeli et al., 2002). It may therefore be possible that a part of the participants received unfavorable feedback, which resulted in a negative association between increasing social resources and work engagement.

Beneficial job crafting and work performance

As expected, increasing structural resources performed by employees and increasing challenging demands performed by employees were positively associated with task performance. Furthermore, increasing structural resources performed by employees, increasing social resources performed by employees and increasing challenging demands performed by employees were all positively associated with contextual performance. These positive associations can be explained by the fact that having a better person-job fit due to job crafting leads to more work performance (Kristof-Brown et al., 2005). In addition, these positive associations are in accordance with previous research (Demerouti et al., 2015; Petrou et al., 2015; Rudolph et al., 2017; Weseler & Niessen, 2016). These results imply that increasing structural resources and challenging demands relate to more task performance and contextual performance. Furthermore, increasing social resources relates to more contextual performance. Contrary to the expectations, increasing social resources was not only negatively associated with work engagement but also with task performance. Building on the mixed findings for performance feedback discussed in the paragraph above, feedback can also lead to reduced task performance (Balcazar, Hopkins & Suarez, 1985). According to Vancouver and Tischner (2004), unfortunate performance feedback given on a task can be perceived as threatening for an individual's self -concept and lead to a reduction in task performance. It may therefore be

possible that a part of the participants received unfavorable feedback, which not only resulted in a negative association between increasing social resources and work engagement, but also with task performance. In order to examine the associations with increasing social resources more deeply, it might be relevant for future research to take into account the nature of the received feedback.

Mediating role of beneficial job crafting performed by employees

Effect on work engagement (Hypothesis 3a). Contrary to the expectations, no full mediation effects were found for the dimensions of beneficial job crafting performed by employees. However, increasing structural resources by employees was a partial mediator for the positive association between all the dimensions of beneficial job crafting performed by leaders and work engagement. Furthermore, increasing social resources by employees was a partial mediator for the negative association between all the dimensions of beneficial job crafting performed by leaders and work engagement. Furthermore, direct effects were found for all the beneficial job crafting dimensions performed by leaders in the association with work engagement. These findings imply that when leaders perform beneficial job crafting dimensions, this relates indirect to more work engagement of employees through increasing structural resources by employees. In addition, this implies that when leaders perform beneficial job crafting dimensions this relates indirect to less work engagement of employees through increasing social resources by employees. Furthermore, the beneficial job crafting dimensions performed by leaders also relate directly to work engagement of employees.

Effect on task performance (Hypothesis 3b). As expected, full mediation effects were found for the dimensions of beneficial job crafting performed by employees. In line of the expectations, increasing structural resources by employees was a full mediator for the positive association between all the dimensions of beneficial job crafting performed by leaders and task performance. Furthermore, increasing social resources by employees was a full mediator for

the negative association between all the dimensions of beneficial job crafting performed by leaders and task performance. Furthermore, increasing challenging demands was a full mediator for the positive association between the dimension increasing challenging demands and task performance. This implies that when leaders perform beneficial job crafting dimensions this relates indirect to more task performance of employees through increasing structural resources performed by employees and increasing challenging demands performed by employees. Furthermore, when leaders perform beneficial job crafting dimensions this relates indirect to less task performance of employees through increasing social resources performed by employees.

Effect on contextual performance (Hypothesis 3b). As expected, a full mediation effect was found for the combined dimensions and the dimension increasing challenging demands performed by employees in the association between increasing challenging demands performed by leaders and contextual performance. This implies that when leaders perform increasing challenging demands this relates indirect to more contextual performance of employees through the combined dimensions performed by employees and the individual dimension increasing challenging demands performed by leaders. However, contrary to the expectations, no mediation effects were found for the beneficial job crafting dimensions performed by employees in the association between the dimensions increasing structural and social resources performed by leaders and contextual performance.

In summary, some partial and full mediation effects were found for the beneficial job crafting dimensions performed by employees in the association between beneficial job crafting dimensions performed by leaders and the work outcomes, work engagement and work performance. Previous research has shown that leaders modeling beneficial job crafting is positively related to beneficial job crafting performed by employees (Ashford et al., 2003; Peeters et al., 2016). Furthermore, previous research has shown that performing beneficial job

crafting is positively related to work engagement and work performance (Petrou et al., 2018; Tims et al., 2013; Rudolph et al., 2017; Weseler & Niessen, 2016). The current study adds to the existing literature by clarifying the role of beneficial job crafting performed by employees in this association.

Study limitations and suggestions for future research

The current study has several limitations. First, this study used a cross-sectional design, in which data is collected at one point of time. Therefore, it is only possible to infer associations and it is not possible to infer causations (Sedgwick, 2014). Moreover, reversed causality could be possible for the associations (Brenninkmeijer & Hekkert-Koning, 2015). To gain more insight into the direction of the associations and possible causal effects, it would be interesting to conduct a longitudinal study.

Second, this study used self-reported data, which may have endangered the credibility of the data, due to common-method-variance (Paulhus & Vazire, 2007). For example, it is possible that social desirability plays a role, because the participants had to score themselves on the various constructs. Therefore, it is advised to use a more objective way of data collection when possible in future research, such as reviews of peers.

Third, the composition of the participant group is a limitation, because the majority of participants in the current study were highly educated (see Table 1). According to Wrzesniewski and Dutton (2001) high educated people are more inclined in job crafting. Therefore, the results of this study are not generalizable to lower educated employees and more research is necessary to get insight in job crafting behavior of lower educated employees.

The last limitation concerns the measurement of leaders modeling beneficial job crafting. As there was no scale yet to score job crafting behavior for leaders, a self-made scale is based on the validated Job Crafting Scale for employees by Tims et al. (2012). Despite the fact that the reliability levels of the subscales were all above $\alpha = .70$ more research is necessary

to find out how valid this scale is. According to Boynton and Greenhalgh (2004), many questionnaires fail to measure what they claim to measure and are therefore not valid. As long as the leaders modeling beneficial job crafting scale is not validated, the results of the current study should be interpreted with caution.

Finally, some suggestions for future research. The results showed that, contrary to the expectations, beneficial job crafting performed by leaders also related directly to more work engagement of employees. Since there is not much research on this direct association, it would be interesting to explore reasons for this direct association in future research. According to Bakker, Westman and van Emmerik (2009) positive emotions and experiences can be contagious for others. It may therefore be possible that when leaders perform beneficial job crafting, their work engagement will increase, which may lead to more work engagement of their employees through a cross-over effect. Next to this suggestion, it would be interesting to include decreasing hindering demands, the harmful form of job crafting into the analysis, to see whether leaders can not only set a good example, but also set a bad example. Finally, the results showed a negative effect between increasing social resources and the work outcomes, work engagement and contextual performance. Therefore, as mentioned before, it would be interesting for future research to delve deeper into the effect of the dimension increasing social resources and to take into account the nature of the feedback the participants received.

Study implications

Some important practical implications can be made as this study clarifies the role of beneficial job crafting performed by employees in the association between leaders modeling beneficial job crafting and work outcomes of employees. The outcomes of this study suggest that if leaders want their employees to perform beneficial job crafting, they can encourage this by modeling beneficial job crafting themselves, as their employees will reproduce this modeled behavior. In addition, the results suggest that if leaders want to indirectly influence their

employees work engagement and work performance in a positive way, they can do this by showing their employees how to increase structural recourses and how to increase challenging demands, as this relates to more work engagement and work performance. However, caution should be taken in encouraging increasing social resources, as this has both positive and negative effects on work engagement and work performance.

Conclusion

This study provided insights in the relationships between leadership modeling, beneficial job crafting, work engagement and work performance. The results show that beneficial job crafting performed by leaders relates to beneficial job crafting performed by employees. Furthermore, increasing structural resources and increasing challenging demands relate to more work engagement and work performance. In addition, increasing social resources has both positive and negative effects on work engagement and work performance. Furthermore, some mediation effects are found for beneficial job crafting performed by employees in the association between beneficial job crafting performed by leaders and the work outcomes, work engagement and work performance. These results show the importance of leadership modeling for the transmission of beneficial job crafting and the direct and indirect influence of leaders on the work outcomes of their employees. Hopefully, these results encourage leaders to start modeling beneficial job crafting, in order to increase the beneficial job crafting behaviors of their employees and to influence their work outcomes in a positive way!

References

Ashford, S. J., Blatt, R., & VandeWalle, D. (2003). Reflections on the looking glass: A review of research on feedback-seeking behavior in organizations. *Journal of management*, *29*(6), 773-799.

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of managerial psychology.*

Bakker, A. B., Rodríguez-Muñoz, A., & Sanz Vergel, A. I. (2016). Modelling job crafting behaviours: Implications for work engagement. *Human Relations, 69(1*), 169-189.

Bakker, A. B., Westman, M., & van Emmerik, I. H. (2009). Advancements in crossover theory. *Journal of Managerial Psychology*.

Balcazar, F., Hopkins, B. L., & Suarez, Y. (1985). A critical, objective review of performance feedback. *Journal of Organizational Behavior Management*, *7*(3-4), 65-89.

Bandura, A. (1969). Social-learning theory of identificatory processes. *Handbook of socialization theory and research*, *213*, 262.

Bandura, A., & Walters, R. H. (1977). *Social learning theory* (Vol. 1). Prentice Hall: Englewood Cliffs.

Berg, J. M., Dutton, J. E., & Wrzesniewski, A. (2008). What is job crafting and why does it matter. *Retrieved form the website of Positive Organizational Scholarship on April*, *15*, 2011.

Berg, J. M., Dutton, J. E., & Wrzesniewski, A. (2013). Job crafting and meaningful work.

Borman, W. C., & Motowidlo, S. M. (1993). Expanding the criterion domain to include elements of contextual performance.

Boynton, P. M., & Greenhalgh, T. (2004). Selecting, designing, and developing your questionnaire. *Bmj*, *328*(7451), 1312-1315.

Brenninkmeijer, V., & Hekkert-Koning, M. (2015). To craft or not to craft. *Career Development International*.

Chen, C. Y., Yen, C. H., & Tsai, F. C. (2014). Job crafting and job engagement: The mediating role of person-job fit. *International Journal of Hospitality Management*, *37*, 21-28.

Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. Academic press.

Crant, J. M. (2000). Proactive behavior in organizations. *Journal of management*, *26*(3), 435-462.

Demerouti, E., Bakker, A. B., & Halbesleben, J. R. (2015). Productive and counterproductive job crafting: A daily diary study. *Journal of Occupational Health Psychology*, *20*(4), 457.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499-512.

van Emmerik, I. H., Bakker, A. B., & Euwema, M. C. (2008). What happens after the developmental assessment center? Employees' reactions to unfavorable performance feedback. *Journal of Management Development*.

Falkenberg, L. and Herremans, I., 1995. Ethical behaviours in organizations: directed by the formal or informal systems?. *Journal of business Ethics*, *14*(2), pp.133-143.

Field, A. (2018). *Discovering statistics using IBM SPSS Statistics* (5th edition). London: Sage Publications.

Frese, M., Fay, D., Hilburger, T., Leng, K., & Tag, A. (1997). The concept of personal initiative: Operationalization, reliability and validity in two German samples. *Journal of occupational and organizational psychology*, *70*(2), 139-161.

Goodman, S. A., & Svyantek, D. J. (1999). Person-organization fit and contextual performance: Do shared values matter. *Journal of Vocational Behavior, 55*(2), 254-275.

Hayes, A. F. (2013). *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York, NY: The Guilford Press.

Kim, M., & Beehr, T. A. (2018). Can empowering leaders affect subordinates' well-being and careers because they encourage subordinates' job crafting behaviors?. Journal of Leadership & Organizational Studies, 25(2), 184-196.

Kristof-Brown, A. L., Zimmerman, R. D., & Johnson, E. C. (2005). Consequences OF INDIVIDUALS'FIT at work: A meta-analysis OF person–job, person–organization, person–group, and person–supervisor fit. Personnel psychology, 58(2), 281-342.

Nabavi, R. T. (2012). Bandura's social learning theory & social cognitive learning theory. *Theory of Developmental Psychology*, 1-24.

Parker, S. K., & Wu, C. H. (2014). Leading for proactivity: How leaders cultivate staff who make things happen.

Paulhus, D. L., & Vazire, S. (2007). The self-report method. *Handbook of research methods in personality psychology*, *1*(2007), 224-239.

Peeters, M. C., Arts, R., & Demerouti, E. (2016). The crossover of job crafting between coworkers and its relationship with adaptivity. *European Journal of Work and Organizational Psychology*, *25*(6), 819-832.

Petrou, P., Demerouti, E., Peeters, M. C., Schaufeli, W. B., & Hetland, J. (2012). Crafting a job on a daily basis: Contextual correlates and the link to work engagement. *Journal of Organizational Behavior*, *33*(8), 1120-1141.

Petrou, P., Demerouti, E., & Schaufeli, W. B. (2015). Job crafting in changing organizations: Antecedents and implications for exhaustion and performance. *Journal of occupational health psychology*, *20*(4), 470.

Petrou, P., Demerouti, E., & Schaufeli, W. B. (2018). Crafting the change: The role of employee job crafting behaviors for successful organizational change. *Journal of Management*, *44*(5), 1766-1792.

Rudolph, C. W., Katz, I. M., Lavigne, K. N., & Zacher, H. (2017). Job crafting: A meta-analysis of relationships with individual differences, job characteristics, and work outcomes. *Journal of Vocational Behavior*, *102*, 112-138.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire: A cross-national study. *Educational and psychological measurement*, *66*(4), 701-716.

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness studies*, *3*(1), 71-92.

Sedgwick, P. (2014). Cross sectional studies: advantages and disadvantages. *Bmj*, 348.

Segers, J., & Inceoglu, I. (2012). Exploring supportive and developmental career management through business strategies and coaching. *Human Resource Management*, *51*(1), 99-120.

Tims, M., Bakker, A. B., & Derks, D. (2012). Development and validation of the job crafting scale. *Journal of vocational behavior*, *80*(1), 173-186.

Tims, M., Bakker, A. B., & Derks, D. (2013). The impact of job crafting on job demands, job resources, and well-being. *Journal of occupational health psychology*, *18*(2), 230.

Tims, M., Derks, D., & Bakker, A. B. (2016). Job crafting and its relationships with person–job fit and meaningfulness: A three-wave study. *Journal of Vocational Behavior*, *92*, 44-53.

Tims, M., Bakker, A. B., Derks, D., & Van Rhenen, W. (2013). Job crafting at the team and individual level: Implications for work engagement and performance. *Group & Organization Management*, *38*(4), 427-454.

Vancouver, J. B., & Tischner, E. C. (2004). The effect of feedback sign on task performance depends on self-concept discrepancies. *Journal of Applied Psychology*, *89*(6), 1092.

Viswesvaran, C., & Ones, D. S. (2000). Perspectives on models of job performance. *International Journal of Selection and Assessment*, *8*(4), 216-226.

Wang, H., Demerouti, E., & Bakker, A. B. (2016). A review of job crafting research. *Proactivity at work: Making things happen in organizations*, 77.

Wang, H., Li, P., & Chen, S. (2020). The impact of social factors on job crafting: A meta-analysis and review. *International Journal of Environmental Research and Public Health*, *17*(21), 8016.

Weseler, D., & Niessen, C. (2016). How job crafting relates to task performance. *Journal of Managerial Psychology.*

Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of management review, 26*(2), 179-201.

Zhou, J. (2003). When the presence of creative coworkers is related to creativity: role of supervisor close monitoring, developmental feedback, and creative personality. *Journal of applied psychology*, *88*(3), 413.

Appendix 1: Tables with the mediation effects of the beneficial job crafting dimensions

Table 9
Mediation of the beneficial job crafting dimensions performed by employees in the relationship between increasing structural resources by leaders and work engagement.

	b	*SE*	95% CI
Total effect (c)	.25**	.08	[0.082, 0.410]
Total indirect effect (ab)	-.06	.06	[-0.183, 0.046]
Increasing structural resources employees (ab)	.08*	.03	[0.018, 0.151]
Increasing social resources employees (ab)	-.17*	.05	[-0.278, -0.075]
Increasing challenging demands employees (ab)	.03	.02	[-0.008, 0.076]
Direct effect (c')	.31**	.09	[0.132, 0.488]

Note. $N = 209$. * $p < .05$ ** $p < .01$

Table 10
Mediation of the beneficial job crafting dimensions performed by employees in the relationship between increasing social resources by leaders and work engagement.

	b	*SE*	95% CI
Total effect (c)	.20*	.09	[0.016, 0.390]
Total indirect effect (ab)	-.08	.06	[-0.198, 0.026]
Increasing structural resources employees (ab)	.07*	.03	[0.015, 0.141]
Increasing social resources employees (ab)	-.17*	.05	[-0.265, -0.078]
Increasing challenging demands employees (ab)	.02	.02	[-0.024, 0.065]
Direct effect (c')	.28**	.10	[0.084, 0.484]

Note. $N = 209$. * $p < .05$ ** $p < .01$

Table 11
Mediation of the beneficial job crafting dimensions performed by employees in the relationship between increasing challenging demands by leaders and work engagement.

	b	*SE*	95% CI
Total effect (c)	.21**	.08	[0.056, 0.370]
Total indirect effect (ab)	-.01	.05	[-0.111, 0.094]
Increasing structural resources employees (ab)	.07*	.03	[0.018, 0.142]
Increasing social resources employees (ab)	-.12*	.04	[-0.204, -0.044]
Increasing challenging demands employees (ab)	.04	.03	[-0.008, 0.101]
Direct effect (c')	.23**	.08	[0.053, 0.386]

Note. $N = 209$. * $p < .05$ ** $p < .01$

Table 12
Mediation of the beneficial job crafting dimensions performed by employees in the relationship between increasing structural resources by leaders and task performance.

	b	*SE*	95% CI
Total effect (c)	.01	.03	[-0.052, 0.069]
Total indirect effect (ab)	-.01	.02	[-0.058, 0.029]
Increasing structural resources employees (ab)	.02*	.01	[0.006, 0.048]
Increasing social resources employees (ab)	-.05*	.02	[-0.088, -0.016]
Increasing challenging demands employees (ab)	.01	.01	[-0.004, 0.035]
Direct effect (c')	.02	.03	[-0.042, 0.089]

Note. $N = 209$. * $p < .05$ ** $p < .01$

Table 13

Mediation of the beneficial job crafting dimensions performed by employees in the relationship between increasing social resources by leaders and task performance.

	b	*SE*	95% CI
Total effect (c)	-.01	.03	[-0.076, 0.061]
Total indirect effect (ab)	-.03	.02	[-0.076, 0.019]
Increasing structural resources employees (ab)	.02*	.01	[0.003, 0.044]
Increasing social resources employees (ab)	-.05*	.02	[-0.100, -0.015]
Increasing challenging demands employees (ab)	.01	.01	[-0.010, 0.029]
Direct effect (c')	.02	.04	[-0.055, 0.091]

Note. $N = 209$. * $p < .05$ ** $p < .01$

Table 14

Mediation of the beneficial job crafting dimensions performed by employees in the relationship between increasing challenging demands by leaders and task performance.

	b	*SE*	95% CI
Total effect (c)	<-.01	.03	[0.975, -0.059]
Total indirect effect (ab)	.01	.02	[-0.029, 0.048]
Increasing structural resources employees (ab)	.02*	.01	[0.004, 0.042]
Increasing social resources employees (ab)	-.04*	.02	[-0.070, -0.009]
Increasing challenging demands employees (ab)	.03*	.01	[0.007, 0.054]
Direct effect (c')	-.01	.03	[-0.071, 0.051]

Note. $N = 209$. * $p < .05$ ** $p < .01$

Table 15

Mediation of the beneficial job crafting dimensions performed by employees in the relationship between increasing structural resources by leaders and contextual performance.

	b	*SE*	95% CI
Total effect (c)	.04	.03	[-0.020, 0.093]
Total indirect effect (ab)	.02	.01	[-0.001, 0.034]
Increasing structural resources employees (ab)	.01	.01	[-0.001, 0.034]
Increasing social resources employees (ab)	-.01	.02	[-0.046, 0.019]
Increasing challenging demands employees (ab)	.02	.01	[-0.006, 0.050]
Direct effect (c')	.01	.03	[-0.044, 0.069]

Note. $N = 209$. * $p < .05$ ** $p < .01$

Table 16
Mediation of the beneficial job crafting dimensions performed by employees in the relationship between increasing social resources by leaders and contextual performance.

	b	*SE*	95% CI
Total effect (c)	.05	.03	[-0.011, 0.116]
Total indirect effect (ab)	<.01	.03	[-0.050, 0.051]
Increasing structural resources employees (ab)	.01	.01	[-0.003, 0.029]
Increasing social resources employees (ab)	-.02	.02	[-0.061, 0.012]
Increasing challenging demands employees (ab)	.01	.02	[-0.019, 0.044]
Direct effect (c')	.05	.03	[-0.014, 0.112]

Note. $N = 209$. * $p < .05$ ** $p < .01$

Table 17
Mediation of the beneficial job crafting dimensions performed by employees in the relationship between increasing challenging demands by leaders and contextual performance.

	b	*SE*	95% *BCI*
Total effect (c)	.05*	.03	[0.001, 0.108]
Total indirect effect (ab)	.05*	.02	[0.012, 0.089]
Increasing structural resources employees (ab)	.01	.01	[-0.001, 0.029]
Increasing social resources employees (ab)	-.01	.01	[-0.035, 0,018]
Increasing challenging demands employees (ab)	.05*	.01	[0.019, 0.077]
Direct effect (c')	.01	.03	[-0.047. 0.059]

Note. $N = 209$. * $p < .05$ ** $p < .01$

Appendix 2: The items of the scale leaders modeling beneficial job crafting

De volgende uitspraken gaan over het gedrag van uw leidinggevende op het werk. Kies bij iedere stelling het antwoord dat op uw leidinggevende het meest van toepassing is.

1= nooit, 2= soms, 3= regelmatig, 4= vaak, 5= heel vaak, 6= n.v.t.

1. Mijn leidinggevende probeert zichzelf te ontwikkelen.
2. Mijn leidinggevende probeert zichzelf bij te scholen.
3. Mijn leidinggevende probeert nieuwe dingen te leren op zijn/haar werk.
4. Mijn leidinggevende zorgt ervoor dat hij/zij, zijn/haar capaciteiten optimaal benut.
5. Mijn leidinggevende zorgt ervoor dat hij/zij zelf kan beslissen hoe hij/zij iets doet.

6. Mijn leidinggevende zorgt ervoor dat hij/zij minder geestelijk inspannend werk hoeft te verrichten.

7. Mijn leidinggevende zorgt ervoor dat hij/zij minder emotioneel inspannend werk moet verrichten.

8. Mijn leidinggevende zorgt ervoor dat hij/zij niet teveel hoeft om te gaan met personen wiens problemen hem/haar emotioneel raken.

9. Mijn leidinggevende zorgt ervoor dat hij/zij niet teveel hoeft om te gaan met mensen die onrealistische verwachtingen hebben.

10. Mijn leidinggevende zorgt ervoor dat hij/zij minder moeilijke beslissingen in zijn/haar werk hoeft te nemen.

11. Mijn leidinggevende zorgt ervoor dat hij/zij zich niet lange tijd achter elkaar hoeft te concentreren.

12. Mijn leidinggevende vraagt anderen om zich te coachen.

13. Mijn leidinggevende vraagt of anderen tevreden zijn over zijn/haar werk.

14. Mijn leidinggevende zoekt inspiratie bij anderen.

15. Mijn leidinggevende vraagt anderen om feedback over zijn/haar functioneren.

16. Mijn leidinggevende vraagt collega's om advies.

17. Als er een interessant project voorbij komt, biedt mijn leidinggevende zichzelf proactief aan om een bijdrage te leveren aan het project.

18. Als er nieuwe ontwikkelingen zijn, staat mijn leidinggevende vooraan om ze te horen en uit te proberen.

19. Als het rustig is op zijn/haar werk, ziet mijn leidinggevende dit als een kans om nieuwe projecten op te starten.

20. Mijn leidinggevende neemt geregeld extra taken op zich hoewel hij/zij daar geen extra salaris voor ontvangt.

21. Mijn leidinggevende probeert zijn/haar werk wat zwaarder te maken door de onderliggende verbanden van zijn/haar werkzaamheden in kaart te brengen.