

# **Relationships Between Psychological Empowerment and Job Crafting: The Mediating Role of Job Involvement**

**Tiiu Kamdron**

**Tallinn University of Technology**

**Liina Randmann**

**Tallinn University of Technology**

*The purpose of this study was to investigate the relationships between job involvement (JI), psychological empowerment (PE), and job crafting (JC). A cross-sectional survey design was used with a convenience sample (N=378) of Estonian employees from different fields. Confirmatory factor analysis and bootstrapping analysis were used to test Structural Equation Modelling (SEM) to examine the relationships between the constructs. Kanungo's Job Involvement Scale, Menon's Empowerment Scale and Job Crafting Scale were used in the research. Results confirmed the main hypothesis about JI acting as partial mediator between PE and JC. A bootstrapping analysis revealed significant partial mediations. JI reinforced the positive relationship between the PE perceived control dimension and the JC increasing challenging job demands dimension, and the negative relationship with the JC decreasing hindering job demands dimension. JI had a decreasing effect on relationships between the PE goal internalization dimension and JC increasing challenging job demands, the decreasing hindering job demands dimension and the increasing social job resources dimension.*

*Keywords: psychological empowerment, job involvement, job crafting, contextual behaviour, Estonia*

## **INTRODUCTION**

Expectations for employees have increased. Employees who exhibit voluntary effort and spontaneous, innovative behaviour are very important for organizations' competitive advantage, which is the focus of the field of contextual performance. Research in job performance should be expanded to include contextual performance (Borman & Motowidlo, 1993; Motowidlo & Van Scotter, 1994). Contextual behaviours are more discretionary and usually not prescribed by role requirements.

On a general level, contextual performance can be classified into two types. The first type is aimed at preserving the smooth functioning of the organization and its characteristics (e.g. organizational citizenship behaviour, pro-social behaviour) as they are at the given moment, and the second type constitutes more proactive behaviours with the aim of changing and improving work procedures and organizational processes (e.g. taking charge, responsibility, voice) (Sonnentag & Frese, 2002). The latter is important when examining JC activities.

When thinking of what position work holds in the person's life, we can be sure that the quality of one's life can be greatly affected by the degree of involvement in or alienation from one's work. There is an understanding that increasing JI makes a person more engaged in one's work and makes the work a more meaningful and fulfilling experience (Brown, 1996), which, in turn, enhances organizational productivity and effectiveness. Therefore, we have a strong reason to think that JI plays a significant part in JC activities.

We have strong reason to suppose the same tendency for PE – empowered employees, who have attained more job resources, will use these for proactive behaviour, including JC (e.g. Huang, 2017). People become more involved (and not only in their jobs) when they perceive the potential of activities or on-going processes to satisfy their salient psychological needs (Seider & Kanungo, 1983; Brown, 1996). Contrary to work alienation, when the basic condition is the lack of intrinsic need satisfaction. We have reason to suppose that the level of JI influences differently the level of JC increasing or decreasing this. There is relatively a lot of research studying the connections between JI and organizational citizenship behaviour, as well as organizational commitment and pro-social behaviour. There is almost no research examining the relationships between JI and forms of proactive contextual behaviour, such as PE and JC.

The second our concern is about the problem of relationships and influences between multidimensional constructs, such as PE and JC in the current study. The question is about how these constructs really work: as a whole or by subscales.

The paper contributes to our understanding of (1) how are related PE and JI, JC and JI, and PE and JC; (2) how are interrelated subscales of these phenomena. This knowledge may provide valuable insights into the problem how in the process of empowering employees we can take account JI as a phenomenon mediating JC activities.

## **THEORY AND HYPOTHESES**

### **Job Involvement**

Kanungo (1982) proposed two separate unidimensional constructs for involvement – JI and work involvement. These are both cognitive states of psychological identification but they represent different constructs. JI is a descriptive belief that develops on an on-going basis of how much the current job can satisfy one's current needs. Kanungo (1982) understood job JI as the cognitive component of job satisfaction and argued that JI and job satisfaction can be distinguished "only on the basis that the former is a cognitive belief state and the latter is an affective state of the workers" (p. 77). Kanungo is of the opinion that JI and job satisfaction are different manifestations of the same underlying construct.

JI can be defined as the degree to which job performance affects an individual's self-esteem. JI is regarded as a component of self-image (Paullay et al., 1994). This way, JI describes the involvement of a specific belief regarding one's relationship with one's current job in the context of a particular job. Work involvement on the other hand is a normative belief describing the value and centrality of work in one's life. The belief is formed based on one's past socialization and is not dependent on a particular job.

Therefore, we can assert that JI is more situationally determined influencing contextual behavior. People can learn to value work in two ways. They can learn to value work from the background, religion or culture of their family and other important people (Kanungo, 1982) or they can learn it through their own experiences, if work is a central element in their lives (Paullay et al., 1994). We have strong reasons to assume, that JI has a direct influence on contextual job performance.

### **Psychological Empowerment**

PE focuses on employees' perceptions regarding empowerment – it is an individual's subjective experience of empowerment based on cognitions about himself/herself in relation to his/her work role. Earlier research emphasizes power as a key concept for understanding empowerment. Rappaport (1981, p.15) defines the empowerment as the "possibility for people to control their own lives". PE is defined as a process through which individuals gain control (Peterson & Zimmerman,

2004; Rappaport, 1981; Zimmerman, 1995). Zimmerman (1995) asserts that PE is comprised of the individual's interaction with their environment and intrapersonal perception of empowerment. Conger & Kanungo (1988) and Thomas & Velthouse (1990) define PE as an intrapersonal sense of empowerment, which occurs as result of cognitive processes within the individual. They are of the opinion that workers use their perceptions based on their interpretation of the organizational climate, especially constraining or empowering. Thomas & Velthouse (1990) contend that positive worker outcomes are determined by the workers' personal perceptions of empowerment, i.e., PE, and not entirely by structural empowerment.

According to Spreitzer (1995), PE exists when employees perceive to have some control over their lives. He defines empowerment as intrinsic motivation, which reflects four types of cognition: Meaning (of the work goal), competence, self-determination and impact (on work outcomes).

Menon (2001), in turn, redefined PE as "a cognitive state characterized by a sense of control, competence and goal internalization" (p.161). Perceived control reflects beliefs about autonomy. Perceived competence refers to a sense of efficacy and feelings of personal capability to successfully complete tasks, and also cope with non-routine work situations. Goal internalization represents the energizing power, for example, of an organization's vision for the future and the individual's association with such a vision or goal. Goal internalization is an important element, which gives meaning to the employee's behaviours. Perceived competence is closely connected with self-efficacy beliefs. Perceived control ensures that employees feel confident and represents preparedness to change the environment. We are of the opinion that Menon's approach, which concentrates on the perceived control in the workplace is more appropriate because of a greater level of conceptual clearness to measure PE as a reflective construct.

### **Job Crafting**

Wrzesniewski and Dutton (2001, p.179) have defined JC as "the physical and cognitive changes employees make in the task or relational boundaries of their work." Grant and Ashford (2008) stress that it is an informal process and it is a form of proactive behaviour. Meaning of work and work identities are not fully determined by formal requirements and conditions. JC is a means workers use to shape their job tasks and relationships in a way which aligns them with their personal interests, needs and values.

The self-determination theory (Deci & Ryan, 2008; Ryan & Deci, 2000), one possible way to interpret motivational processes at work-place, suggests that humans have three salient intrinsic psychological needs that, when satisfied, lead to optimal functioning, growth, environmental coherence, and well-being: Autonomy, relatedness, and competence.

Wrzesniewski and Dutton's (2001) theoretical position on JC relate to the autonomy, relatedness and competence needs expressed by the self-determination theory. Through JC, employees can design their existing jobs to more closely align with their needs, values and skills, and through this process, to create a more enjoyable and meaningful experience on the job (Berg et al., 2010; Wrzesniewski & Dutton, 2001).

Using the refined job demands-resources model, Tims et al. (2012) recently empirically distinguished between four JC dimensions: (a) Increasing structural job resources; (b) increasing social job resources; (c) increasing challenging job demands; and (d) decreasing hindering job demands. Two of these dimensions refer to the type of job resources that are crafted: Structural (e.g. autonomy and variety) and social job resources (e.g. social support and feedback). The other two dimensions refer to the level of job demands: Challenging (e.g. new projects) and hindering job demands (e.g. fewer cognitive demands). Job resources refer to the employee's motivational state, whereas job demands refer to his/her well-being state. As mentioned above, JC research has yet to determine whether employees who report crafting their jobs, also report a change in their level of job demands and resources (e.g. Oldham & Hackman, 2010). Zhang and Parker (2019) propose that job crafting can be organized as a hierarchical structure as approach or avoidance crafting at the highest hierarchical level, followed by whether the job crafting is behavioral or cognitive (i.e., job crafting form), and whether it involves changing job demands or job resources (i.e., job crafting content).

This hierarchical structure seems to be the first one to actually bring the different job crafting perspectives together (Bruning & Champion, 2019; Lazazzara et al., 2020).

### **Relationships Between Psychological Empowerment and Job Involvement**

Researching differences between work engagement, JI and organizational commitment, Hallberg & Schaufeli (2006) found that job JI was unrelated to all health complaint measures, associated with high workload but unrelated to role conflict. Work engagement, on the contrary, was unrelated to workload but connected to role conflict. All three constructs appeared to increase in the presence of autonomy and feedback but these aspects were less significant for JI. Only JI is related to intrinsic motivation. Bass (1965) stated already years ago that the employee's job involvement increases if one has the authority to make decisions and takes responsibility.

There are two important assumptions for JI: 1) JI is based on work-related personal needs; 2) JI is a cognitive state connected with perceived goals. Therefore, the element of goal internalization is the clue connecting two of these states: JI and PE. The perceived competence component is one of the most important ones for developing self-efficacy – therefore, it is connected positively to JI but perceived control is not a necessary component for the emergence and functioning of job involvement. Based on the above assumptions, the following hypotheses are proposed. By increasing the role of goals, giving employees more autonomy and cognitive resources, managers increase the sense of connection to work.

*Hypothesis 1: PE is positively related to JI.*

*Hypothesis 1a: The goal internalization dimension of PE is positively related to JI.*

*Hypothesis 1b: The perceived competence dimension of PE is positively related to JI.*

*Hypothesis 1c: The perceived control dimension of PE is negatively related to JI.*

### **Relationships Between Job Involvement and Job Crafting**

The job demands–resources model is the appropriate model for connecting all research constructs of the present study, except for JI, which is traditionally not interpreted in this context. In this model, there are two types of job characteristics: Job demands and resources (Demerouti et al., 2001). Job resources are the psychological, social, organizational and physical resources that enable goal achievement, reduce job demands or buffer against them, and enable growth and development (Bakker & Demerouti, 2007). In addition, by satisfying the basic psychological needs of autonomy, belongingness and competence, job resources are also intrinsically motivating for employees (Van den Broeck et al. 2010).

Activities, which increase job resources are positively connected with motivational processes, and therefore linked to JI. Some demands are related positively to motivational processes – challenging job demands, whereas the demands related to job stress are called hindering job demands (Cavanaugh et al., 2000). JI as the state of high cognitive connection to one's job, the state of engagement also shows that employees don't need reducing activities.

*Hypothesis 2: JI is positively related to JC.*

*Hypothesis 2a: JI is positively related to the increasing challenging job demands dimension of JC.*

*Hypothesis 2b: JI is positively related to the increasing structural job resources dimension of JC.*

*Hypothesis 2c: JI is negatively related to the decreasing hindering job demands dimension of JC.*

*Hypothesis 2d: JI is positively related to the increasing social job resources dimension of JC.*

### Relationships Between Psychological Empowerment and Job Crafting

Modern literature provides limited information about the relationships between JI and PE. If JI is significantly related to PE and to job engagement, then managers should be more interested in creating working environments that promote PE and be more interested in teaching employees more effective ways of JI. Researchers have shown that, under conditions of autonomy, employees are more likely to behave proactively (Parker et al., 2006). The potential to motivate is higher in the case of goal-oriented behaviour because of meaningful goals, which are particularly motivating. Experience in the empowerment process can also lead to redefining goals and, therefore, to further job crafting. There has been no research conducted to directly examine the effects of JI on levels of PE.

JI as a cognitive state of mind is influenced by the importance of one's needs and by the perceptions of the potentialities of the job to satisfy these needs. The content of the needs is determined by the person's past experience and constantly modified by present job conditions (Kanungo, 1990). Based on these assumptions, we assume that there is a link between JI, PE and JC, where the JI plays mediator role. The content of these needs can be reinforced through job behaviour when the employee can satisfy these needs and meet personal goals (Kanungo, 1979).

**Hypothesis 3:** PE is significantly related to JC through the (partial) mediation of JI.

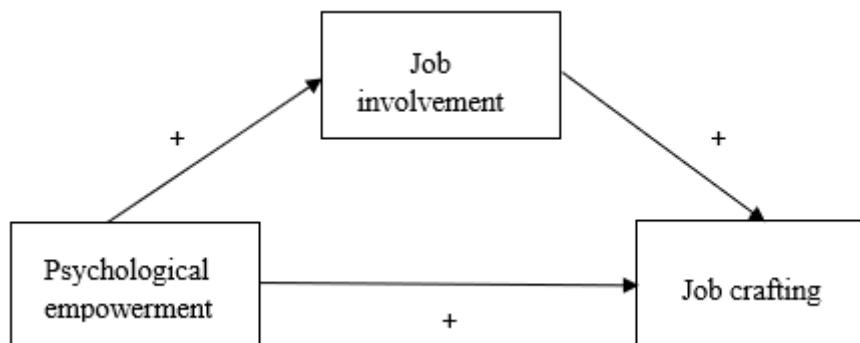
**Hypothesis 3a:** The perceived control dimension of PE is positively related to increasing challenging job demands and negatively related to the decreasing job demands dimension of JC through the (partial) mediation of JI.

**Hypothesis 3b:** The goal internalization dimension of PE is positively related to increasing structural job resources, increasing challenging job demands and the increasing social resources dimension of JC through the (partial) mediation of JI.

**Hypothesis 3c:** The competence dimension of PE is positively related to decreasing hindering job demands and to the increasing structural job resources dimension of JC through the (partial) mediation of JI.

The hypothesized theoretical model of the study is represented in **FIGURE 1**.

**FIGURE 1**  
**THE HYPOTHESIZED MODEL WHERE JOB INVOLVEMENT FULFILS THE MEDIATOR ROLE BETWEEN PSYCHOLOGICAL EMPOWERMENT AND JOB CRAFTING**



## METHOD

### Sample and Procedure

We used a questionnaire to collect data. Participants were employees of several organizations in Estonia, who did different types of work and voluntarily participated in research. We sent out 450 questionnaires and received 378 responses, meaning we had a response rate of 84%.

The sample comprised 378 employees, 43% of whom were men and 57% of whom were women. Their mean age was 35.5 years ( $SD=12.4$ ). 31% of the respondents worked in the public sector, 65% in the private sector, 2% in the third sector and 2% were sole proprietors. 20 spheres of work were represented in the sample. The sample included 31% of workers, 44% of specialists, 10% of low-level managers, 11% of middle-level managers, and 4% of top-level managers. The mean length of service was 6.4 years ( $SD=7.1$ ). The mean size of the organization the respondents worked for was 51 employees ( $SD=22$ ). 2% of the respondents had primary education, 33% had secondary education, 22% had vocational education, 38% had higher education, and 5% had an academic degree. Mean gross income was 720 euros per month ( $SD=160$ ).

The original English versions of the questionnaires were first translated into Estonian by the two authors of the article. The translations were checked by work psychologists and some modifications in wording were made.

Partially completed questionnaires were excluded from the sample. When 5% or less data points in random pattern were missing in the response (11 cases), then the missing data were replaced by the mean on the variable for complete cases.

### Measures

#### *General Level of Job Involvement*

General level of JI was measured with 10-item Job Involvement Scale (JIS) (Kanungo's (1982). The respondents indicated how often they had felt involvement in everyday behaviour during the previous three months using a scale ranging from 1= never to 6= often.

#### *General Level of Psychological Empowerment*

General level of PE was measured with Empowerment Scale (Menon, 2001; Kotze, Menon & Vos, 2007), which is a 15-item scale including three subscales: Perceived control, competence and goal internalization, five items for each dimension. The respondents indicated how often they had engaged in everyday behaviour during the previous three months using a scale ranging from 1= never to 6= often. Empirically, Menon's three-factor model has been tested and validated in many international settings such as Greece (Dimitriades, 2005), Spain (Barroso Castro et al., 2008) and Turkey (Erturk, 2010). Menon (2001, Menon & Hartmann, 2002) and Kotze et al. (2007) reported Cronbach's alpha coefficients for subscales respectively, as follows: Perceived control .86 and .79, perceived competence .73 and .86, and goal internalization .84 and .86.

#### *General Level of Job Crafting*

General level of JC was measured with 21-item context independent Job Crafting Scale developed by Tims et al. (2012) which includes four subscales: increasing structural job resources (e.g. "I try to learn new things at work), increasing challenging job demands" (e.g. "If there are new developments, I am one of the first to learn about them and try them out"), increasing social job resources (e.g. "I ask others for feedback on my job performance"), and decreasing hindering job demands (e.g. "I make sure that my work is mentally less intense"). The scale measures self-initiated behaviours aimed at making actual changes in the job according the person's preferences, skills and abilities (Berg et al., 2013).

All items were rated on a 6-point scale, ranging from 1= never to 6= very often. Respondents assessed how often they had engaged in described behaviours in their everyday working life during the previous three months. Earlier studies have shown reliability coefficients for four factors ranging from .75 to .82 (e.g. Tims et al.; 2012; Bakker et al., 2016). Three factors in the original scale include five items and 'decreasing hindering job demands' consists of six items.

## Data Analysis

An exploratory factor analysis was conducted on all scales to determine a workable factor structure. An EFA with maximum likelihood extraction with direct Varimax rotation was conducted, as we assume that items loading under one factor do not have cross loadings with others. Items that did not meet a threshold loading of .40 (Stevens, 2012) or cross-loaded on multiple factors, were excluded one at a time. After that, a confirmatory factor analysis was made using AMOS 23.0.

To assess model fit, absolute and relative fit indices were used (Bentler, 1990). The absolute fit indices determine how well the a priori model fits or reproduces the data (McDonald, Ho, 2002). The included absolute fit indices used were the hi-square/df ratio [ $\chi^2/df$ ], Goodness of Fit Index [GFI], Root Mean Square Residual [RMR] and the Root Mean Square Error of Approximation [RMSEA]. Three relative fit indices were included: Normed Fit Index [NFI], Tucker–Lewis Index [TLI], and Comparative Fit Index [CFI].

In CFA, the factor loading of one indicator variable to each latent variable was fixed to 1.0. Correlations were allowed between the pairs of latent variables in the models. Correlations between other variables were fixed to .0.

### *General Level of Job Involvement*

The job involvement scale's factor structure was checked with exploratory factor analysis with maximum likelihood with Varimax rotation. EFA revealed two factors. The Kaiser-Meyer-Olkin value was .791, which exceeds the recommended critical value of .6 (Cerny & Kaiser 1977), and Bartlett's Test was statistically significant at .000. The two-factor solution explained 49.72% of variance. One factor consisted of six cognitive involvement items. The other component included four affective involvement items. One affective involvement item needed to be deleted due to very low loading value (lower than .3). The Cronbach's alpha for cognitive involvement factor was .743, and .614 for affective involvement 3-item factor.

CFA was performed on two-factor solutions. The two factor model with 9 items indicated a poor fit ( $\chi^2/df = 3.677$ , GFI = .878, RMR = .094, IFI = .866, TLI = .795, CFI = .856, RMSEA = .088, PCLOSE = .000). CFA for six cognitive involvement items indicated a good fit ( $\chi^2/df = 2.931$ , GFI = .978, RMR = .064, IFI = .965, TLI = .941, CFI = .964, RMSEA = .07, PCLOSE = .123, AIC = 50.380, ECVI = .130). Modification indices showed covariance between two items' error terms. Incorporation of the error covariance made a substantially large improvement to model fit, the overall chi square value decreased from 26.380 to 10.705, yielding a difference in  $\chi^2$  value ( $\Delta\chi^2_{(1)}$ ) of 15.675. A re-specified model showed a better fit ( $\chi^2/df = 1.338$ , RMR = .042, IFI = .995, TLI = .990, CFI = .994, RMSEA = .029, PCLOSE = .754, AIC = 36.705, ECVI = .094) and this model was used in the current study. Our results were similar to the version of Kanungo's (1982) Job Involvement Scale used by Sjöberg & Sverke (2000) in their study. The final 6-item scale measures a person's cognitive state of psychological identification with the present job.

### *General Level of Psychological Empowerment*

EFA with no restrictions on the number of factors was carried out on the 15 items. A factor analysis extracted three components (eigenvalues 5.936, 2.440 and 1.237; 64.09% variance explained), which correspond to the theory supposed three subscales. The Kaiser-Meyer-Olkin value was .883, and Bartlett's Test was statistically significant at .000. In two components, goal internalization and perceived competence, five items had high loadings on their respective components ranging from .801 to .629 and low or no loadings on the other two factors. Only three factors loaded under the third, perceived control factor. Two items had high loadings (.819 and .785) and the third had relatively low loading (.457). Two perceived control factors loaded under wrong factors and the correlations were also relatively weak. These items were excluded from further analysis. All the subscales had acceptable Cronbach's alpha values: Goal internalization (.881), perceived competence (.856) and perceived control (.777).

A confirmatory factor analysis of 13 items was made and three latent factors retained from an exploratory factor analysis. The three factor model indicated a satisfactory fit ( $\chi^2/df = 3.304$ , GFI = .921, RMR = .072, IFI = .948, TLI = .928, CFI = .948, RMSEA = .078, PCLOSE = .00, AIC =

256.301, ECVI = .669). Differently from Menon's research (2001; 2002), our model correlations between components were stronger. Perceived control was positively and significantly correlated to two components: Goal internalization ( $r = .53, p < .001$ ) and perceived competence ( $r = .38, p < .001$ ). Perceived control and perceived competence were also significantly correlated but the correlation was weak ( $r = .254, p < .001$ ). We also tested the fit of a single factor model. The single factor model with all 13 items loading on a single factor showed a poor model fit ( $\chi^2/df = 10.126$ , GFI = .777, RMR = .133, IFI = .779, TLI = .716, CFI = .778, RMSEA = .154, PCLOSE = .000, AIC = 677.703, ECVI = 1.769). The confirmatory factor analysis confirmed the three-factor structure of the psychological empowerment scale and this was used in the current study.

### *General Level of Job Crafting*

An exploratory factor analysis (EFA) was conducted using a principal component analysis with Varimax rotation, and the later revealed factor structure was cross-validated in a confirmatory factor analysis (CFA). The EFA revealed a five-factor solution. The Kaiser-Meyer-Olkin value was .791, and Bartlett's Test was statistically significant at .000. Five factors explained 61.56% of variance. Items for three dimensions loaded to three factors respectively, but the items of the decreasing hindering job demands dimension loaded on two factors, each containing three items. After excluding five items, EFA was carried out the second time and it revealed the four-factor solution with four items loading on each factor. The four factors explained 56.48% of variance. The calculated Cronbach's alpha values for the whole Job Crafting scale and for subscales were as follows: The whole scale – .772, increasing structural job resources – .817, increasing challenging job demands – .710, increasing social job resources – .728, and decreasing hindering job demands – .710.

A confirmatory factor analysis was used to test the fit of three models: The second-order four-factor structure (Model 1), the second-order five-factor structure (Model 2), and the one-factor structure (Model 3). The both four- and five-factor second-order models have a good model fit. The four-factor model was used in the current study.

### **Research Model Analysis**

Before analysing in SEM, the data were screened for any possible problems. Skewness and kurtosis statistics were calculated for data to test for non-normality, whereas for skewness index, absolute values greater than 3.0 were considered extreme, and for kurtosis, absolute values greater than 10 were considered extreme (Kline, 2011). All skewness values fell within an acceptable range (.161 - -0.746; SE = .124) pointing to slightly negatively skewed distribution. Also, all kurtosis values showed acceptable results ranging from -.484 to .556, SE = .247. An analysis of standard residuals was carried out, and absolute value of 2.58 was taken as critical value for z-score (Field, 2009). Five cases were considered outliers (z-scores from 2.612 to -3.152) and were excluded from analysis.

A curve estimation test was conducted for all the relationships in the model and it determined that all relationships were sufficiently linear. In the tests, a covariance-based structural equation modelling algorithm (AMOS) was used. And finally, tests to find out if the data met assumption of collinearity indicated that multi-collinearity was not a concern (the lowest estimate for tolerance was 0.507 and the highest estimate for VIF was 1.974). The tolerance values lower than .10 and VIF values higher than 10 were considered to indicate extreme multivariate collinearity (Kline, 2011).

CAF was performed to test the proposed research model. Problematic items for the model were defined and excluded from the scales. Items with highly correlated error terms, and those which loaded on the wrong factor and were excluded from subsequent analyses, were defined as problematic. The remaining Psychological Empowerment scale comprised nine items, three items for each of three factors; the Job Crafting scale comprised 12 items, three for each of the four factors, and Job Involvement one factor included six items.

Convergent validity for first order factors in measurement model was assessed by Composite Reliability [CR] and Average Variance Extracted [AVE]. Discriminant validity was assessed by comparing Maximum Shared Variance [MSV] and Average Shared Variance [ASV]. Thresholds for these values were as follows: CR > .7, AVE > .5 and MSV < AVE (Hair et al., 2010). All but one



factor showed acceptable values. Job Involvement scale's AVE was below required 0.5 (AVE = .467); other values reached the required levels.

A total of three models were examined. Model 1 – the measurement model – was composed of eight first-order factors, each derived from their respective items (see **TABLE 1**). Model 2 – the composite model – was composed of two second-order and one first-order factors. PE and JC were modelled as second-order factors composed of three dimensions (control, goal internalization and competence) and four dimensions (structural job resources, hindering job demands, challenging job demands and social job resources), respectively. JI was presented as first-order factor and was derived from its respective items. Model 3 – the path model – was composed of three first-order factors of Psychological Empowerment, one first-order factor of Job Involvement and four first-order factors of Job Crafting presented as observable factors. In Model 4, all the items loaded on the same factor.

In CFA, the factor loading of one indicator variable to each latent variable was fixed to 1.0. Correlations were allowed between the pairs of latent variables in the models. Correlations between other variables were fixed to .00.

**TABLE 1**  
**CONFIRMATORY FACTOR ANALYSIS RESULTS FOR RESEARCH MODEL**

	$\chi^2/df$	GFI	RMR	NFI	IFI	CFI	TLI	RMSEA	PCLOSE
Model 1	1.964	.92	.071	.881	.938	.937	.921	.05	.475
Model 2	2.228	.901	.104	.855	.915	.914	.898	.057	.054
Model 3	2.121	.995	.024	.973	.986	.984	.851	.054	.371
Model 4	2.342	.869	.114	.798	.874	.872	.857	.059	.003

As table 3 results show, Model 1 — the measurement model – and Model 3 – the path model – revealed the best fit indices.

## RESULTS

Means, standard deviation, scale's Cronbach alphas and variable inter-correlations are summarized in **TABLE 2**. The three dimensions of PE were significantly correlated and had strong correlations with the composite score of PE. All JC dimensions were significantly correlated with the composite score of JC. All dimensions, except the hindering job demands dimension, were positively and significantly correlated. Hindering job demands was not significantly correlated with any other dimensions.

**TABLE 2**  
**MEANS, STANDARD DEVIATIONS, CRONBACH ALPHAS AND CORRELATIONS**  
**AMONG STUDY VARIABLES (N=378)**

	Mean	SD	1	2	3	4	5	6	7	8	9	10
1. Job Involvement	3.65	.76	<b>.74</b>									
2. Psychological Empowerment	4.54	.69	.23**	<b>.89</b>								
3. PE perceived control	4.13	1.14	-.023	.75**	<b>.78</b>							
4. PE goal internalization	4.57	1.01	.33**	.83**	.45**	<b>.88</b>						
5. PE competence	5.02	.73	.22**	.65**	.21**	.41**	<b>.86</b>					

6. Job Crafting	4.1	.56	.21**	.45**	.25**	.45**	.31**	<b>.77</b>				
7. JC structural job resources	4.84	.92	.31**	.44**	.22**	.49**	.36**	.69**	<b>.82</b>			
8. JC challenging job demands	3.77	1.03	.2**	.45**	.39**	.40**	.18**	.56**	.43**	<b>.71</b>		
9. JC social job resources	3.7	1.24	.08	.26**	.19**	.24**	.16**	.67**	.31**	.31**	<b>.73</b>	
10. JC hindering job demands	4.35	1.02	-.05	.003	-.12*	-.013	.15*	.44**	.03	-.07	.09	<b>.71</b>

Notes : \*p < 0.05; \*\*p < 0.001; Cronbach's alpha estimates on the diagonal.

A correlation analysis was made to test Hypotheses H1 (a-c) and H2 (a-d), which proposed that job involvement is positively related to psychological empowerment and its dimensions and is also positively related to job crafting and its dimensions. The results were later confirmed by making CFA. Data from Table 4 show that, although the correlation index is weak, job involvement is positively and significantly related to psychological empowerment (H1). Hypotheses H1b and H1c were also confirmed, but Hypothesis H1a was not confirmed. The goal internalization component of psychological empowerment was negatively and non-significantly related to job involvement. Hypothesis H2, which proposed that job involvement is significantly related to job crafting, was confirmed. Hypotheses H2a and H2b proposing positive and significant relationships between the job involvement and job crafting components dimensions' increasing job challenge and increasing job resources were confirmed. However, we had to reject Hypotheses H2c and H2d. The relationships between job involvement and the dimensions' increasing job social resources and hindering job demands were non-significant. The latter had also a negative relationship.

To control the third hypothesis, the proposed mediation effects in the model were assessed by applying the Baron and Kenny's (1986) causal steps approach. In assessing mediation, four conditions must be satisfied. The initial variable, psychological empowerment must be significantly associated with the mediator, job involvement. This was met as is shown by the findings for Hypothesis 1, and partially met for Hypotheses 1a, 1b and 1c. The initial variable must also be associated with the dependent variable, job crafting. There must be significant relationships between mediator, job involvement and dependent variable. This requirement was met. The Hypothesis 2 was confirmed. Hypotheses 2a and 2b were also confirmed, but Hypotheses 2c and 2d were rejected. Finally, the effect of the initial variable, psychological empowerment (and its dimensions) must be reduced when the mediator – job involvement – is entered into the model.

The significance of indirect effects was tested using a bootstrap estimation approach with 1,000 samples (Shrout & Bolger, 2002; Hayes, 2009), and the 95% confidence interval was computed by determining the indirect effects at the 2.5th and 97.5th percentiles (see **TABLE 3**). Results show that, with a 95% confidence, job involvement was a significant partial mediator of the effects of the PE dimensions on the job crafting dimensions in seven cases out of 12.

**TABLE 3**  
**MEDIATION ANALYSIS WITH BOOTSTRAPPING**

Relationship	Direct without mediator (c)	Direct with mediator (JI*) (c')	Bootstrap 95% CI		
			Lower	Upper	p
PE-control→JC-social	.107; p=.052	.112; p= .044	-.023	.223	.088
PE-control→JC-demands	-.144; p= .010	-.166; p= .003	-.254	-.034	.017
PE-control→JC-ressources	-.003; p= .96	.018; p= .705	-.065	.098	.701
PE-control→JC-challenge	.267; p= .00	.293; p= .000	.169	.373	.002
PE-goal→JC-social	.161; p= .007	.147; p= .019	.001	.298	.049
PE-goal→JC-demands	-.024; p= .686	-.036; p= .569	-.085	.176	.529

PE-goal→JC-ressources	.410; p= .000	.352; p= .000	.205	.431	.002
PE-goal→JC-challenge	.275; p= .000	.202; p= .000	.066	.334	.004
PE-competence→JC-social	.068; p= .211	.065; p= .233	-.079	.226	.287
PE-competence→JC-demands	.186; p= .000	.199; p= .000	.117	.435	.003
PE-competence→JC-ressources	.189; p= .000	.176; p= .000	.095	.342	.002
PE-competence→JC-challenge	-.014; p= .782	-.002; p= .962	-.143	.126	.940

\* JI – job involvement

\* PE – psychological empowerment

\* JC – job crafting

A bootstrapping analysis revealed significant partial mediations. JI reinforced the positive relationship between the PE perceived control dimension and the JC increasing challenging job demands dimension, and a negative relationship with the JC decreasing hindering job demands dimension. JI had a decreasing effect on relationships between the PE goal internalization dimension and JC increasing challenging job demands, JC increasing social job resources dimension and JC increasing structural job resources dimensions. JI reinforced the relationship between the PE competency dimension and the JC decreasing hindering job demands dimension but decreased the relationship with the JC increasing challenging job demands dimension. Hypotheses 3a, 3b and 3c were confirmed.

### Research Model Testing

An exploratory specification search was conducted to find a best-fitting model (a true population model for the variables under study). The best model was selected using *C/df*, AIC, BBC and BIC as fit function criteria. The best model excluded one path from the initial model, connection between job involvement and job crafting dimension increasing job social resources. *C/df* = 1.340 ( $\Delta C/df = .575$ ) was better for a specified model, all other fit indexes were slightly better.

Model fit of the final model was adequate:  $\chi^2/df = 1.96$ , CFI = .95, TLI = .91, IFI = .92, RMSEA = .049.

## DISCUSSION

The purpose of the study was to find relationships between JI, PE and JC. These constructs have been separately or in pair research objects of many studies. Unfortunately, relationships between all these phenomena have been investigated in few studies. First of all, based on earlier studies, there was a strong possibility that JI as the contextual phenomenon is one of the important factors influencing JC activities. Also, we had strong expectations about the significant positive relationships between PE and JC, which have been confirmed in our study. We were especially interested in relationships between the dimensions of PE and JC because of the lack of information based on earlier studies.

We found that JI fulfils the partial mediator role between PE and JC, which was the most important finding of our research. We also found some direct non-mediated significant relationships between some subscales of PE and JC.

JI can be interpreted as a cognitive belief state of psychological identification in the context of a particular job (Kanungo, 1979, 1981). An individual's psychological identification with a particular job depends on the saliency of his or her needs (both extrinsic and intrinsic) and the perceptions he or she has about the need-satisfying potentialities of the job. Salient needs are also one of the reasoning factors releasing JC activities, which is the basic presumption connecting JI as a psychological state with job crafting activities. Our findings suggest that JI is significantly positively related to JC. A self-efficacy need for positive self-image is antecedent of JC as shown by previous studies (Niessen et al., 2016), although self-efficacy is a predictor of proactive behaviour. We found

that JI is positively related to the increasing job challenge component of JC and to the increasing job resources component of JC. Both activities – increasing job challenge and seeking for autonomy – include positive work behaviour and have a rising effect upon self-efficacy beliefs and connect employees to their jobs even more.

We did not find significant relationship between JI and increasing social resources component of JC – social support is not so important factor than job content for identification with one's job.

We found that PE is significantly positively related to JI. We found significant positive relationships between JI and the perceived competence dimension of PE. Need for competency is one of the basic needs, which is necessary for the functioning of self-efficacy beliefs. Self-efficacy beliefs are closely connected with JI. One possible conceptualization of JI is the degree to which the employee perceives that his job performance is central to his self-concept (Saleh & Hosek, 1976). Self-efficacy beliefs are also one of the cognitions of PE (Conger & Kanungo, 1988). Perceived competence, the second subscale of PE, is another feeling, which refers to self-efficacy (Thomas & Velthouse, 1990; Menon, 2001).

If we think about positive relationships between PE and JC, we have to mention, that the need for PE seems to be one of the universal employees' needs. Some theorists emphasize that gaining control is a basic universal human need (e.g. Burger & Cooper, 1979). Job control is the predictor of JC (Lyons, 2008). Employees' cognitions typically associated with PE are related to experiencing control over one's work environment. Employees who control their work environment can decide what to do, when to do it, and in what order. They also feel that their actions make a difference. These aspects of experienced control have been referred to as 'perceived control' (Menon 2001). But the situation is different in relationships between PE and JI. We found a weak negative relationship between the PE perceived control subscale and JI. Need for competence is important for identification with one's job, but the need for power to control the environment is not so important for JI. This result improves also the understanding of JI as a cognitive state. Somehow, the negative relationship between these two constructs is rather surprising.

We found some direct positive relationships between PE and JC, and some relationships partially mediated by JI.

Direct relationships without mediation of JI were found between the following components: Competence and control components of PE are positively related to the increasing social job resources component of JC. These relationships are weak but statistically significant. Three main possible ways to craft relationships are as follows: Building relationships (e.g. increasing amount of interactions), reframing relationships (changing the nature of relationships) and adapting relationships (providing help and support to others) (Berg et al., 2013) fulfil the function of gaining control over the relationship and through this activity, crafting job to be more meaningful. PE control component is positively connected to the increasing structural job resources component.

JI plays no mediator role in the increasing social job resources dimension, and this dimension acts as a relatively exceptional unit compared with others JC dimensions. Employees who identified themselves more through their job do not need to receive remarkably extensive support and feedback from co-workers. This component does not play a significant role in JC for involved employees.

In some relationships JI has increasing effect upon these. The mediation effect is stronger in two relationships between PE and JC: Perceived control and goal internalization. JI reinforced a positive relationship between the PE perceived control dimension and the JC increasing challenging job demands dimension, and a negative relationship with the JC decreasing hindering job demands dimension. Through JC, employees have means to work on their person-job fit by adapting their job characteristics (Tims et al., 2016). Involved employees are interested in variety at work. Therefore, more identification with job is connected with JC towards more interesting work, not towards decreasing job variety. JI had a decreasing effect on relationships between the PE goal internalization dimension and JC increasing challenging job demands, the decreasing hindering job demands dimension and the increasing social job resources dimension.

The effect of mediations is weaker in relationships between the PE competency component and JC. We found some relationships (these are four) where JI plays decreasing role between PE and JC subscales. JI decreased the relationship with the JC increasing challenging job demands dimension.

Empowering competence activities give employees the opportunity to decrease their work-loads and reduce negative issues of organization politics, while allowing increasing resources to exist, which may be useful for achieving organizational goals.

Finally, our research data showed that all subscales of the research constructs act like independent factors in all their significant relations. It means that all work-related attitudes have different meanings and interact differently in the organizational internal environment.

### **Strengths, Limitations and Future Research Directions**

The present findings have some important theoretical implications for the literature on psychological empowerment and job crafting. First of all, this is the first study examining the mediator role of job involvement between psychological empowerment and job crafting. We found that JI fulfils a partial mediator role between all three PE subscales and some JC subscales. The least related JC subscale is the increasing social job resources dimension. High level of JI means cognitive identification with one's job and therefore need for social support is not so high.

Perceived competence is an underlying theme of the majority of research into empowerment. Enhancing self-efficacy beliefs is the cornerstone of Conger and Kanungo's empowerment strategy (Conger & Kanungo, 1988). Employees with high JI have already higher self-efficacy beliefs and, therefore, JI has a decreasing effect on some JC activities.

Second, interesting findings explain PE and JC subscales mechanisms of action. In fact, they act as independent phenomena. All aspects are important, not only the phenomena as a whole. Each aspect or subscale of the concept acts independently, each has particular features and aims. Any change in one or more measures cause variation on the relationships with other constructs. Some researchers are in the same opinion (e.g. Rodrigues et al., 2017).

Several limitations of our study should be noted. Limitations of the study include its cross-sectional nature and the utilization of a single method (i.e. questionnaire) for the collection of data. Data collection included only self-reported measures. The data were collected from a single source using self-reports, which might have led to common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, we only used carefully constructed and validated measures; we also tested a one-factor model to reduce the risk of common method bias influencing our results. There were also some limitations regarding the generalizability of the study since the research was limited to Estonian participants.

Future research would examine the relationship of job involvement as the recent studies relatively neglected phenomenon to other organizational outcomes, such as organizational citizenship, innovative behaviour etc.

In conclusion the research study explains relationships between psychological empowerment, job involvement and job crafting, which is not a very well researched area. Our study proves that job involvement fulfils a partial mediator role in the relationship between psychological empowerment and job crafting. The study also raises the question about relationships between the psychological empowerment and job crafting subscales. Our data produced results which allow drawing conclusions about the subscales acting as independent factors in all significant relationships. Some of the relationships, especially between the psychological empowerment and job crafting dimensions, require further research. Some possible explanations based on these relationships are outlined in this paper.

### **REFERENCES**

- Bakker, A.B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal Managerial Psychology*, 22(3), 309–328.
- Bakker, A.B., Rodriguez-Munoz, A., & Sanz Vergel, A.I. (2016). Modelling job crafting behaviours: Implications for work engagement. *Human Relations*, 69(1), 169–189.
- Baron, R.M., & Kenny, D.A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.

- Barroso Castro, C., Villegas Perinán, M.M., & Casillas Bueno, J.C. (2008). Transformational Leadership and Followers' Attitudes: The Mediating Role of Psychological Empowerment. *International Journal of Human Resource Management*, *19*, 1842–1863.
- Bass, B.M. (1965). *Organizational psychology*. Boston: Allyn & Bacon.
- Bentler, P.M. (1990). Comparative fit indices in structural models. *Psychological Bulletin*, *107*(2), 238–246.
- Berg, J.M., Dutton, J.E., & Wrzesniewski, A. (2013). Job crafting and meaningful work. In B.J. Dik, Z.S. Byrne & M.F. Steger (Eds.), *Purpose and Meaning in the Workplace* (pp. 81–104). Washington, DC: American Psychological Association.
- Berg, J.M., Wrzesniewski, A., & Dutton, J.E. (2010). Perceiving and responding to challenges in job crafting at different ranks: When proactivity requires adaptivity. *Journal of Organizational Behavior*, *31*(2), 158–186.
- Borman, W.C., & Motowidlo, S.M. (1993). Expanding the criterion domain to include elements of contextual performance. Chapter in N. Schmitt & W.C. Borman (Eds.), *Personnel Selection in Organizations* (pp. 71–98). San Francisco: Jossey-Bass.
- Brown, S.P. (1996). A meta-analysis and review of organizational research on job involvement. *Psychological Bulletin*, *120*(2), 235–255.
- Bruning, F.P., & Campion, M.A. (2019). Exploring job crafting: Diagnosing and responding to the ways employees adjust their jobs. *Business Horizons*, *62*, 625–635.
- Burger, J.M., & Cooper, H.M. (1979). The desirability of control. *Motivation and Emotion*, *3*(4), 381–393.
- Cavanaugh, M.A., Boswell, W.R., Roehling, M.V., & Boudreau, J.W. (2000). An empirical examination of self-reported work stress among U.S. managers. *Journal of Applied Psychology*, *85*(1), 65–74.
- Cerny, B.A., & Kaiser, H.F. (1977). A study of a measure of sampling adequacy for factor-analytic correlation matrixes. *Multivariate Behavioral Research*, *12*(1), 43–47.
- Conger, J., & Kanungo, R. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review*, *13*(3), 471–482.
- Deci, E.L., & Ryan, R.M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology*, *49*(3), 182–185.
- Demerouti, E., Bakker, A.B., Jonge, J., Janssen, P., & Schaufeli, W.B. (2001). Burnout and engagement at work as a function of demands and control. *Scandinavian Journal of Work and Environmental Health*, *27*(4), 279–286.
- Dimitriades, Z. (2005). Employee empowerment in Greek context. *International Journal of Manpower*, *26*(1), 80–92.
- Erturk, A. (2010). Exploring Predictors of Organizational Identification: Moderating Role of Trust on the Associations Between Empowerment, Organizational Support, and Identification. *European Journal of Work and Organizational Psychology*, *19*(4), 409–441.
- Field, A. (2009). *Discovering Statistics Using SPSS*. Third edition. Sage Publications Ltd.
- Hallberg, U.E., & Schaufeli, W.B. (2006). “Same same” but different? Can work engagement be discriminated from job involvement and organizational commitment? *European Psychologist*, *11*(2), 19–127.
- Hayes, A.F. (2009). Beyond Baron and Kenny: Statistical Mediation Analysis in the New Millennium. *Communication Monographs*, *76*(4), 408–420.
- Huang, J. (2017). The relationship between employee psychological empowerment and proactive behavior: Self-efficacy as mediator. *Social Behavior and Personality*, *45*(7), 1157–1166.
- Humphrey, S.E., Nahrgang, J.D., & Morgeson, F.P. (2007). Integrating motivational, social and contextual work design features: A meta-analytic of summary and theoretical extension work design literature. *Journal of Applied Psychology*, *92*(5), 1332–1356.
- Kanungo, R.N. (1979). The concepts of alienation and involvement revisited. *Psychological Bulletin*, *86*(1), 119–138.
- Kanungo, R.N. (1981). Work alienation and involvement: Problems and prospects. *International Review of Applied Psychology*, *30*(1), 1–15.

- Kanungo, R.N. (1982). Measurement of job and work involvement. *Journal of Applied Psychology*, 67, 341–349.
- Kanungo, R.N. (1990). Culture and work alienation: western models and eastern realities. *International Journal of Psychology*, 25(3–6), 795–812.
- Kline, R.B. (2011). *Principles and practice of structural equation modelling* (2nd ed.). New York: The Guildford Press.
- Kotze, E., Menon, S.T., & Vos, B. (2007). Psychological empowerment in the South African Military: The generalisability of Menon's Scale. *SA Journal of Industrial Psychology*, 33(2), 1–6.
- Lazazzara, A., Tims, M., & de Gennaro, D. (2020). The process of reinventing a job: A meta-synthesis of qualitative job crafting research. *Journal of Vocational Behavior*, p.116.
- Leana, C., Appelbaum, E., & Shevchuk, I. (2009). Work process and quality of care in early childhood education: The role of job crafting. *Academy of Management Journal*, 52(6), 1169–1192.
- Lyons, P. (2008). The crafting of jobs and individual differences. *Journal of Business and Psychology*, 23(1–2), 25–36.
- McDonald, R.P., & Ho, M.H.R. (2002). Principles and practice in reporting statistical equation analyses. *Psychological Methods*, 7(1), 64–82.
- Menon, S.T. (2001). Employee empowerment: An integrative psychological approach. *Applied Psychology: An International Review*, 50(1), 153–180.
- Menon, S.T., & Hartmann, L.C. (2002). Generalizability of Menon's Empowerment Scale Replication and Extension with Australian Data. *International Journal of Cross Cultural Management*, 2(2), 137–153.
- Motowidlo, S.J., & Van Scotter, J.R. (1994). Evidence that task performance should be distinguished from contextual performance. *Journal of Applied Psychology*, 79(4), 475–480.
- Niessen, C., Weseler, D., & Kostova, P. (2016). When and why do individuals craft their jobs? The role of individual motivation and work characteristics for job crafting. *Human Relations*, 69(6), 1287–1313.
- Oldham, G.R., & Hackman, J.R. (2010). Not what it was and not what it will be: The future of job design research. *Journal of Organizational Behavior*, 31(2–3), 463–479.
- Parker, S.K., Williams, H.M., & Turner, N. (2006). Modeling the antecedents of proactive behavior at work. *Journal of Applied Psychology*, 91(3), 636–652.
- Paullay, I., Alliger, G., & Stone-Romero, E. (1994). Construct validation of two instruments designed to measure job involvement and work centrality. *Journal of Applied Psychology*, 79, 224–228.
- Peterson, N.A., & Zimmerman, M.A. (2004). Beyond the individual: Toward a nomological network for organization empowerment. *American Journal of Community Psychology*, 34(1/2), 129–145.
- 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, 1120–1141.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., & Podsakoff, N.P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *Journal of Applied Psychology*, 88(5), 879–903.
- Rappaport, J. (1981). In Praise of Paradox: A Social Policy of Empowerment Over Prevention, *American Journal of Community Psychology*, 9(1), 1–25.
- Rodrigues, M., Menezes, I., & Ferreira, P.D. (2018). Validating the formative nature of psychological empowerment construct: Testing cognitive, emotional, behavioral, and relational empowerment components. *Journal of Community Psychology*, 46, 58–78.
- Ryan, R.M., & Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78.

- Saleh, S.D., & Hosek, J. (1976). Job involvement: Concepts and measurements. *Academy of Management Journal*, 19(2), 213–224.
- Seider, S.M., & Kanungo, R.N. (1983). Work alienation: An integrative approach. *Contemporary Sociology*, 12(4), 437.
- Shrout, P.E., & Bolger, N. (2002) Mediation in Experimental and Nonexperimental Studies: New Procedures and Recommendations. *Psychological Methods*, 7(4), 422–445.
- Sjöberg, A., & Sverke, M., (2000). The interactive effect of job involvement and organizational commitment on job turnover revisited: A note on the mediating role of turnover intention. *Scandinavian Journal of Psychology*, 41(3), 247–52.
- Sonnentag, S., & Frese, M. (2002). Performance concepts and performance theory. In S. Sonnentag (Ed.), *Psychological Management of Individual Performance* (pp. 3–26). John Wiley and Sons Ltd.
- Spreitzer, G. (1995). An empirical test of a comprehensive model of intrapersonal empowerment in the workplace. *American Journal of Community Psychology*, 23(5), 601–629.
- Stevens, J.P. (2012). *Applied multivariate statistics for the social sciences* (2nd edition). Hillsdale, NJ: Erlbaum.
- Thomas, K., & Velthouse, B. (1990). Cognitive elements of empowerment: An “interpretive” model of intrinsic task motivation. *Academy of Management Review*, 15(4), 666–681.
- Tims, M., Bakker, A.B., & Derks, D. (2012). Development and validation of the job crafting scale. *Journal of Vocational Behavior*, 80, 173–186.
- 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.
- Van den Broeck, A., Vansteekinst, M., De Witte, H., Soenens, B., & Lens, W. (2010). Capturing, autonomy, competence, and relatedness at work: Construction and initial validation of the Work-related Basic Need Satisfaction scale. *Journal of Occupational and Organizational Psychology*, 83(4), 981–1002.
- 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.
- Zhang, F., & Parker, S.K (2019). Reorienting job crafting research: A hierarchical structure of job crafting concepts and integrative review. *Journal of Organizational Behavior*, 40(2), 126–146.
- Zimmerman, M.A. (1995). Psychological empowerment: issues and illustrations. *American Journal of Community Psychology*, 23(5), 581–599.