

# The Impact of Self-Efficacy and Work Engagement on Healthcare Professionals' Proactive Behavior

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## Abstract

Job crafting (JC) is a form of proactive behavior and refers to the initiatives employees that could take to change their tasks or other job characteristics to achieve the best person-job fit. JC consists of six dimensions: seeking structural and social job resources, as well as challenges, hindering job demands, optimizing job demands, and delegating tasks. The aim of the present study was to explore the impact of self-efficacy and work engagement on healthcare professionals' (HP) proactive behavior. A convenience sample of 295 HP working in Primary and Secondary healthcare structures of Northern Greece completed a questionnaire that included: 1) demographic/occupational characteristics, 2) the Job Crafting Scale, 3) the Generalized Self-Efficacy Scale (GSE) and 4) the Utrecht Work Engagement Scale (UWES). Increased age was found to be associated with decreased levels of seeking social job resources ( $p < 0.01$ ). Education level was positively associated with increased levels of seeking structural job resources ( $p < 0.01$ ), seeking challenges ( $p < 0.05$ ), and optimizing job demands ( $p < 0.05$ ), while job position was found to be negatively related to delegating tasks ( $p < 0.01$ ). Self-efficacy was positively associated with increased levels of seeking structural resources ( $p < 0.001$ ), challenges ( $p < 0.001$ ), and increased levels of optimizing job demands ( $p < 0.001$ ), while it was positively associated with decreased levels of delegating tasks ( $p < 0.05$ ). In addition, increased work engagement was found to be associated with increased levels of seeking social job resources ( $p < 0.05$ ), challenges ( $p < 0.01$ ), and optimizing job demands ( $p < 0.01$ ). Findings highlight the importance of self-efficacy, work engagement and individual characteris-

tics in the realization of a resourceful work environment and HP' adjustment in the organization. Thus, interventions that promote HP' JC proactive behaviors should be encouraged.

## Keywords

Job Crafting, Healthcare Professionals, Proactive Behavior, Self-Efficacy, Work Engagement

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## 1. Introduction

In recent years, due to competition, economic crisis and rapid technological evolution, there has been a global shift from manufacturing economies to service and knowledge economies, which has dramatically changed the nature of work in organizations [1], especially in the healthcare sector. Therefore, work design theory and research highlight the importance of proactive behaviors of employees, such as job crafting. Job crafting (JC) refers to employees' perception about their work environment and the changes they might make to balance between workplace needs and their own preferences and values [2]. Recent studies indicate that job characteristics and individual factors, such as self-efficacy [3] [4] and work engagement [5], have a positive impact on employees' JC.

In multifaceted organizational constructs, such as the healthcare sector, individual characteristics (*i.e.* age, gender) and personal resources (*i.e.* self-efficacy) and, work engagement are often studied to better understand their impact on job performance and other positive organizational outcomes [6]. Many studies in fact, have shown that self-efficacy is positively related to work engagement [7] [8], while work engagement is linked with proactive behaviors [9] [10] [11].

Self-efficacy refers to individuals' expectations to produce desired behaviors and to successfully accomplish environmental changes [12]. Employees with high levels of self-efficacy use more appropriate coping and stress-management strategies in a more effective way, and are characterized by their efficiency to implement job resources [13]. Previous research in employees enrolled in a part-time master's of business administration (M.B.A.) program at a large urban university has shown that self-efficacy is positively related to proactive behavior, namely taking responsibility [14], to personal initiative [15] and proactive workplace behavior [16]. It also contributes to action readiness, positive change behavior [17], individual learning and goal achievement [18]. However, before adopting these proactive behaviors, employees evaluate the likely outcomes (costs and benefits) and the likely success [14].

Work engagement, is defined as "a positive, fulfilling, affective-motivational state of work-related well-being" [19], and according to Schaufeli & Bakker [20], consists of three dimensions: "vigor" (high levels of energy and mental adaptability), "dedication" (pride, enthusiasm, sense of importance, inspiration) and "absorption" (complete concentration and absorption at work). The concept of

work engagement refers to a continuous and pervasive work situation that does not refer to an object, person, event or behavior [20]. Work engagement is enhanced when individuals act proactively, namely when they are mobilized to seek challenges and effectively participate in problem solving [9]. Indeed, Ghitulescu [21] found a positive relationship between work engagement and JC in 164 employees of a Swedish car factory. In the light of the foregoing, we assume that the work engagement of healthcare professionals (HP) will be positively related to JC.

JC can be viewed in the light of the Job Demands-Resources model (JD-R) [22], because the employee who craft his/her job initiates changes in the level of job demands and job resources. According to this model developed by Tims *et al.* [2], four dimensions of JC in the workplace are defined: 1) seeking structural job resources, 2) seeking social job resources, 3) hindering job demands, and 4) seeking challenges. Two further dimensions were added (when and why) involving 5) optimizing job demands [23], and 6) delegating tasks [24].

The present study aims to investigate the impact of self-efficacy and work engagement on healthcare professional's JC. The choice of HP was based on the fact that a well-designed work environment in the health sector can directly affect both HP and patients [25].

## 2. Method

### 2.1. Participants and Procedure

A cross sectional study was conducted in Primary (health centers, local health units, rural and regional medical units) and Secondary healthcare structures (public hospitals) in Northern Greece from March to June 2019. A convenience sample of 295 HP was considered eligible for the study (response rate 71.6%). Inclusion criteria were at least one year of experience and a permanent employment status. Participants were orally invited to fill out the study questionnaire anonymously, accompanied by a description of the aim of the study. A ballot box was placed in each structure to collect the questionnaires. The study conforms to the principles outlined in the Declaration of Helsinki.

### 2.2. Measures

An anonymous battery of research tools was used with the following: 1) a demographic and occupational characteristics questionnaire, 2) the Job Crafting Scale, 3) the Generalized Self-Efficacy Scale, and 4) the Utrecht Work Engagement Scale.

#### **Job Crafting Scale (JC-Scale)**

The JC Scale [2] consists of 21 items and comprises of four dimensions/sub-scales: “seeking structural job resources”, “seeking social job resources”, “seeking challenges”, and “hindering job demands”. In addition to the above 4 sub-scales, the new JC sub-scale “optimizing job demands” by Demerouti and Peeters [23] was used, which consists of 5 items. Finally, the JC sub-scale on

“delegating tasks” [24] consists of 8 items. All the sub-scales of JC were adapted in Greek population [26] [27]. Cronbach’s alpha for the sub-scales was 0.52, 0.66, 0.66, 0.60, 0.82, 0.93 respectively. For all sub-scales, a five-point rating scale was used (1 = never, 5 = always).

#### **Self-Efficacy**

Self-Efficacy was assessed using the Generalized Self-Efficacy Scale (GSE) [28] and consists of 10 items (Cronbach’s alpha = 0.75). The total score is calculated by finding the sum of the all items. For the GSE, the total score ranges between 10 and 40, with a higher score indicating higher level of self-efficacy. The GSE has been translated and validated in Greek [29]. The response categories ranged from 1 (Not at all true) to 4 (Exactly true).

#### **Utrecht Work Engagement Scale**

Work engagement, including vigor, dedication and absorption, was assessed using the Utrecht Work Engagement Scale (UWES) [20], consisting of nine items, which has been evaluated in all cultures and across professions [30], and validated in Greek population [31]. Cronbach’s alpha for both the sub-scales vigor and dedication was 0.84, and for the sub-scale absorption was 0.81. For all three sub-scales, a six-point rating scale was used (1 = never, 5 = always).

### **2.3. Statistical Analysis**

Data analyses were carried out using the statistical package SPSS 24.0. Firstly, a descriptive analysis of each of the variables included in the study was performed. In order to assess the distributions of the data the Kolmogorov-Smirnov test of normality was used and  $p = 0.05$  was considered significant. Since the regularity check showed no normal distribution of variables, non-parametric methods were used, such as Mann-Whitney for two independent sample tests, Kruskal Wallis for  $k$  independent samples. Also, bivariate analyses using Spearman’s correlation coefficient were conducted to analyze how the variables were correlated. Finally, five multiple linear regression analyses have been carried out to analyze the effect of the predictive factors, such as demographic and occupational characteristics, self-efficacy and work engagement to JC proactive behaviors, such as seeking structural and social job resources, seeking challenges, optimizing job demands and delegating tasks (dependent variables).

### **3. Results**

The convenience sample of the present study consisted of 295 HP with mean age 44.01 years. Demographic/Occupational characteristics of HP are presented in **Table 1**. Descriptive statistics for the three scales (self-efficacy, work engagement and JC) are presented in **Table 2**. Bivariate analyses between independent variables and JC proactive behaviors are presented in **Table 3**.

Multivariate linear regression analyses were applied for the identification of the predictive factors that were independently associated with JC proactive behaviors.

**Table 1.** Demographic/Occupational characteristics of the HP.

Characteristics	N (%)
<b>Gender</b>	
Female	243 (82.4)
Male	52 (17.6)
<b>Age</b>	
	44.01 (8.05) <sup>a</sup>
<b>Marital status</b>	
Live with a partner/spouse	171 (58.8)
Without partner/spouse (Single, Divorced, Widowed)	120 (41.2)
<b>Profession</b>	
Nurses/Nursing assistants	235 (79.7)
Other HP (residents and specialists doctors, psychologists, social workers, physiotherapists)	59 (20.3)
<b>Educational level</b>	
Secondary education	97 (33)
Tertiary education	164 (55.8)
Master/Philosophy Doctorate (MSc/PhD)	33 (11.2)
<b>Working experience</b>	
	18.6 (8.9) <sup>a</sup>
<b>Working experience in this structure</b>	
	11.3 (9.1) <sup>a</sup>
<b>Job position</b>	
Department Heads/Supervisors	28 (9.5)
Employees	231 (78.4)

<sup>a</sup>: Average (standard deviation).

**Table 2.** Means and standard deviations (SD) of scales and sub-scales.

Scales and Sub-scales	Means	SD
Self-efficacy	27.01	4.34
<i>Vigor</i> (WE)	7.98	2.84
<i>Dedication</i> (WE)	8.31	3.04
<i>Absorption</i> (WE)	7.74	2.85
<i>Seeking structural job resources</i> (JC)	16.09	2.29
<i>Seeking social job resources</i> (JC)	12.83	2.79
<i>Seeking challenges</i> (JC)	14.49	2.69
<i>Hindering job demands</i> (JC)	16.17	2.95
<i>Optimizing job demands</i> (JC)	16.35	2.95
<i>Delegating tasks</i> (JC)	14.76	6.27

Notes: WE = Work engagement; JC = Job crafting

According to the results of the multivariate linear regression **Table 4**, marital status could predict seeking structural job resources. Level of education and self-efficacy were associated with increased levels of seeking structural job resources. Concerning seeking social job resources it was found that an increase in age was associated with decreased levels of this proactive behavior. However, an increase in the level of absorption (dimension of work engagement) was associated with increased levels of seeking social job resources (**Table 5**).

Multivariate linear regression **Table 6** showed that increased levels of education, self-efficacy, and the two dimensions of work engagement (vigor and absorption)

**Table 3.** Summary table of correlations between quantitative and non-quantitative independent variables and JC behaviors.

Independent variables	Job Crafting (JC) behaviors					
	Seeking structural job resources	Seeking social job resources	Seeking challenges	Hindering job demands	Optimizing job demands	Delegating tasks
Age	0.111	-0.203**	0.080	0.019	0.146*	-0.071
Work experience	0.134*	-0.121*	0.163**	0.064	0.142	-0.004
Work experience in this structure	0.086	-0.120	0.110	-0.019	0.092	0.038
Gender	0.099	0.074	0.835	0.382	0.071	0.000**
Marital status	0.014*	0.234	0.737	0.121	0.001**	0.001**
Education level	0.000**	0.539	0.004**	0.083	0.015*	0.691
Profession	0.053	0.484	0.042	0.916	0.501	0.506
Job position	0.206	0.170	0.010*	0.820	0.936	0.003**
Self-efficacy	0.425**	0.062	0.364**	0.000	0.431**	-0.210**
Vigor (WE)	0.322**	0.142*	0.373**	-0.093	0.302**	-0.202**
Dedication (WE)	0.246**	0.101	0.237**	-0.164**	0.211**	-0.180**
Absorption (WE)	0.208**	0.185**	0.331**	-0.086	0.163**	-0.027

Notes: Significant Correlations at \* $p < 0.05$ , \*\* $p < 0.01$ ; WE = Work engagement.

**Table 4.** Multivariate linear regression analysis for variables predicting seeking structural job resources.

Independent variables	$R^2 = 0.276, F = 13.20, p < 0.001$		
	$\beta$	S.E.	p
Work experience	0.290	0.180	0.109
Marital status	0.024	0.207	0.921
Education level	0.558	0.198	<0.01
Self-efficacy	0.176	0.031	<0.001
Vigor (WE)	0.093	0.074	0.206
Dedication (WE)	0.047	0.072	0.514
Absorption (WE)	0.026	0.67	0.694

Notes:  $\beta$  = Beta coefficient; S.E. = Standard Error;  $p$  = Two tailed statistical significance; WE = Work engagement.

were associated with increased levels of seeking challenges. Regression analysis revealed that an increase in the level of dedication (dimension of work engagement) was associated with decreased levels of hindering job demands ( $\beta = -0.144, p < 0.01$ ).

Increased levels of education, self-efficacy and work engagement were associated with increased levels of optimizing job demands **Table 7**. Finally, it was

**Table 5.** Multivariate linear regression analysis for variables predicting seeking social job resources.

Independent variables	$R^2 = 0.071, F = 4.88, p < 0.001$		
	$\beta$	S.E.	p
Age	-0.974	0.780	<0.01
Work experience	-0.022	0.380	0.946
<i>Vigor</i> (WE)	-0.018	0.083	0.829
<i>Absorption</i> (WE)	0.170	0.080	<0.05

Notes:  $\beta$  = Beta coefficient; S.E. = Standard Error; p = Two tailed statistical significance; WE = Work engagement.

**Table 6.** Multivariate linear regression analysis for variables predicting seeking challenges.

Independent variables	$R^2 = 0.252, F = 10.50, p < 0.001$		
	$\beta$	S.E.	p
Work experience	0.241	0.230	0.296
Education level	0.502	0.260	<0.05
Job position	-0.963	0.571	0.093
Self-efficacy	0.170	0.042	<0.001
<i>Vigor</i> (WE)	0.227	0.094	<0.01
<i>Dedication</i> (WE)	-0.178	0.097	0.067
<i>Absorption</i> (WE)	0.213	0.085	<0.01

Notes:  $\beta$  = Beta coefficient; S.E. = Standard Error; p = Two tailed statistical significance; WE = Work engagement.

**Table 7.** Multivariate linear regression analysis for variables predicting optimizing job demands.

Independent variables	$R^2 = 0.240, F = 11.14, p < 0.001$		
	$\beta$	S.E.	p
Age	0.436	0.281	0.122
Marital status	0.267	0.281	0.342
Education level	0.503	0.256	<0.05
Self-efficacy	0.221	0.040	<0.001
<i>Vigor</i> (WE)	0.250	0.095	<0.01
<i>Dedication</i> (WE)	-0.021	0.094	0.826
<i>Absorption</i> (WE)	-0.031	0.091	0.733

Notes:  $\beta$  = Beta coefficient; S.E. = Standard Error; p = Two tailed statistical significance; WE = Work engagement.

**Table 8.** Multivariate linear regression analysis for variables predicting delegating tasks.

Independent variables	$R^2 = 0.127, F = 5.42, p < 0.001$		
	$\beta$	S.E.	p
Gender	3.293	1.009	0.653
Marital status	-0.689	0.606	0.257
Job position	-4.036	1.349	<0.01
Self-efficacy	-0.192	0.100	<0.05
<i>Vigor</i> (WE)	-0.198	0.220	0.370
<i>Dedication</i> (WE)	-0.050	0.200	0.802

Notes:  $\beta$  = Beta coefficient; S.E. = Standard Error;  $p$  = Two tailed statistical significance; WE = Work engagement.

found that the job position was associated with reduced levels of delegating tasks **Table 8**. Similarly, an increase in the level of self-efficacy was associated with decreased levels of this proactive behavior.

#### 4. Discussion

The findings of the present study indicate that age, level of education, job position, self-efficacy, and work engagement predict HP' JC proactive behaviors. Older HP was found to seek less for social job resources. These findings are in agreement with previous research in employees from different companies and across diverse job levels [6], in which older employees might not search for social resources due to already established work routines and network [32]. The positive relationship between level of education and seeking structural job resources, seeking challenges and optimizing job demands, was also identified in a similar study [33]. However, job position was found to be negatively related to delegating tasks. A possible explanation could be that participants in the present study considered delegating tasks as an administrative activity, which can only be implemented by supervisors or managers.

Self-efficacy had a positive relationship between seeking structural job resources, seeking challenges, and optimizing job demands. These findings are in line with previous research [15] [16], in which self-efficacy was related to employees' personal initiative in taking on responsibilities and additional tasks. Within this context, employees with high self-efficacy were found to seek more for structural resources, constructive demands and improvements in their work demands [14]. However, task assignment was found to be negatively related to self-efficacy. One possible explanation could be that self-efficacious employees do not delegate tasks to other colleagues because they believe in their abilities to carry out their tasks and achieve goals [18].

The positive association between work engagement and seeking challenges and optimizing job demands could be explained by the fact that employees with high levels of work engagement are more likely to achieve their work goals, thus



enhance their sense of self-esteem by creating the conditions for adopting proactive JC behaviors [34]. However, dedication (dimension of work engagement) was negatively related to hindering job demands. According to Petrou *et al.* [35], hindering job demands may protect the employee's well-being in stress situations, and reduce the motivation or need for employees to act.

## 5. Strengths and Limitations

This study has two main strengths. The first is that good reliability scales were used. Second, it is that a battery of questionnaires with many sub-scales that evaluate many variables related to JC was used.

However, a number of limitations must be mentioned. First, data was obtained using self-reported measures, and participants may have answered the questionnaire in a socially desirable manner, which could have led to an overestimation of the true associations. Second, because of the convenience nature of sampling strategy (or because of the convenience sample of participants), generalizability of the current results to all HP, or/and in other professions and sectors needs to be demonstrated.

Third, this study was cross-sectional in nature; therefore, we could not determine the causality between dependent variables and JC. Future studies among HP should try to replicate the present findings using an experimental or longitudinal design to establish.

## 6. Conclusion

Healthcare organizations that aim at creating a healthy work environment for employees should identify which factors promote positive proactive behaviors. Current evidence shows that self-efficacy and work engagement can contribute to HP' adoption of certain JC proactive behaviors. The present findings can be taken into account in work (re)design and in JC intervention programs.

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## Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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