

Job Crafting and job performance: The mediating effect of engagement

Ana Moreira ^{1,*}, Tiago Encarnação ², João Viseu^{3,4} and Maria José Sousa ^{5,*}

¹ School of Psychology, ISPA – Instituto Universitário, Rua do Jardim do Tabaco 34, Lisboa, 1149-041, Portugal, amoreira@ispa.pt

² Universidade do Algarve, Campus de Gambelas, 8005-139 Faro, a67320@ualg.pt

³ Departamento de Psicologia, Universidade de Évora, Escola de Ciências Sociais, Departamento de Psicologia, Colégio Pedro da Fonseca, PITE - Parque Industrial e Tecnológico de Évora, Rua da Barba Rala, 7000 Évora, joao.viseu@uevora.pt

⁴ Research Centre for Tourism, Sustainability and Well-Being, Universidade do Algarve, Faculdade de Economia, Edifício 8, Campus de Gambelas, 8005-139 Faro.

⁵ Department of Political Sciences and Public Policies, University Institute of Lisbon, Avenida das Forças Armadas, 1649-026 Lisbon, Portugal; ecmfo@iscte-iul.pt; maria.jose.sousa@iscte-iul.pt

* Correspondence: amoreira@ispa.pt and maria.jose.sousa@iscte-iul.pt

Abstract: The main purpose of this study was to investigate whether work engagement mediates the relationship between job crafting and job performance. To this end, the following hypotheses were formulated: (1) job crafting establishes a positive and significant association with job performance; (2) job establishes a positive and significant association with work engagement; (3) work engagement establishes a positive and significant association with job performance; (4) work engagement mediates the association between job crafting and job performance. The sample was composed of 453 participants working in organizations based in Portugal. The hypotheses formulated in this study were tested by performing simple and multiple linear regressions. The results indicated that only increasing structural job resources and increasing challenging job demands established a positive and significant association with task performance. Increasing structural job resources, increasing social job resources, and increasing challenging job demands established a positive and significant association with citizenship performance and work engagement. Work engagement established a positive and significant association with task performance and citizenship performance. Only a partial mediating effect, through work engagement, was observed on the association between increasing challenging job demands and task performance, and between increasing social job resources and citizenship performance.

Keywords: job crafting; job performance; work engagement; quantitative study.

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1. Introduction

Work is an important attribute, and it has a significant preponderance in the lives of individuals as it contributes to the maintenance of a quality lifestyle. A working individual spends one-third of this day at work, i.e., eight hours. As such, it is essential to understand how this context influences well-being levels [1]. The work contacts and contents assimilated in this context can somehow affect individual well-being; however, it is also important to highlight the promising prospects for human development, favouring perceived self-efficacy, value, social support, abilities, and even self-confidence [2]. As argued by [1], the primary daily source of adults' well-being is the work context. Thus, it is essential to search for alternatives that provide subjects the ability to foster their work experience, e.g., making it more challenging, meaningful, and stimulating, also contributing to a significant improvement in their well-being levels [3].

Organizations favour engaged employees over nonengaged for better task performance. For example, supervisors provide better classifications, in performance analysis, to engaged workers [4–6]. This occurs because these employees are more proactive, perform their tasks with more dedication, and frequently go beyond the tasks that are assigned to them [7, 8]. Engagement assumes a relevant position in achieving positive results, both at the individual- and organizational-level. Thus, there is a growing to understand, in-depth, the impact of this construct on organizational success. Numerous studies have emphasized that employees exhibit greater engagement when they feel that their work provides a wide range of resources [9, 10]. The identification of freedom by employees, based on decision-making and the use of various tools that facilitate the fulfilment of their duties, coupled with the support provided by colleagues and managers, is indicative of a greater propensity to experience feelings grounded in vigour, dedication, and absorption, the main components of work engagement [11]. Although employees should seek to engage in the implementation of a motivational process aimed at job creation [12], it is also vital that they take a position that considers their responsibility to promote their well-being at work, i.e., workers must be proactive in the achievement of individual and occupational well-being. In this sense, they must adjust their boundaries, adapting them to their preferences, abilities, and skills [15]. This process that proactively induces work is called job crafting. The concept is characterized by its persuasive aptitude concerning the meaning assigned to work [16]. The changes implemented by employees to their activities, work relationships, and interactions aim at contemplating meaningful experiences, translating into changes in how they perceive work processes [2, 13]. These changes assist in defining their identity in the professional environment, integrating it with their identity [14, 16]. That is, job crafting is the process through which workers seek to align their characteristics with the characteristics of their work.

Thus, works that sustain significance express a link to engagement [17]. In turn, valuing work aspects that reflect the experience of meaning leads to greater work engagement [18]. The Job Demands-Resources model (JD-R) proposed by [19] highlights an association between increased job resources and increased levels of engagement. In this line, numerous studies have addressed the relationship between work engagement and job crafting [20]. However, there is still a need to deepen the understanding of the various mechanisms inherent in this link.

According to [21], job crafting enhances employees' work engagement, leading to better job performance. Following this reasoning, this study aimed to evaluate whether work engagement acts as a mediating mechanism between job crafting and job performance. The analysis of the relationship between these three constructs is crucial, as it allows to understand if job crafting and work engagement act synergistically to explain job performance or if only one of these constructs assumes more relevance in predicting performance.

2. Theoretical Framework and Research Hypotheses

2.1. Job Crafting

Job crafting is recurrently associated with two perspectives (Demerouti, 2014). According to [15], the concept fits into a set of changes imposed by individuals, both at the physical and cognitive levels, which manifest themselves in the performance of their work tasks and their relational limits. It is considered that there are three types of crafting: task crafting - which is formulated in the definition of numbers, objectives, and typology of work tasks; relational crafting - based on the promotion of changes in the social characteristics of work and in the forms of interaction with it; and cognitive crafting - implemented by changing the way employees view their work.

Job crafting is based on the search and satisfaction of a set of human needs, namely autonomy, positive self-image, and relationships [15]. In this way, employees go beyond the boundaries of the standard labour convention, aiming to implement a work format

adjusted to their preferences, abilities, and needs [16], i.e., they search for an alignment between their skills and tasks performed. This ideology gives meaning and identity to task performance [15], highlighting numerous benefits, such as job satisfaction, prosperity, and resilience [14]. The second and latest perspective highlights the articulation of job crafting with the JD-R model [19]. This model argues that all occupations and work characteristics can be integrated in two dimensions: job demands and job resources [22, 23].

The demands imposed on workers emphasize work-related aspects that require effort and lead to ill-being; on the contrary, resources refer to the work characteristics that favour goal achievement and individual development, as well as lead to a decrease in demands [23]. In short, the existence of job resources leads to occupational well-being and the appearance of desired work-related outcomes (e.g., job performance). Following this line of thought, according to [24], job crafting refers to the changes made by subjects, aiming to establish a balance between job demands and job resources, adjusting them to their needs and skills. This harmonization, in turn, stimulates the experience of satisfaction, perception of meaning, and work engagement [24]. In agreement with this perspective, job crafting is composed of four dimensions: 1) increase of challenging job demands: work-related behaviours that lead to an additional increase of demands, but which, at the same time, lead to the satisfaction of individual growth needs and the achievement of the defined goals, as a result, feelings of accomplishment are reached; 2) decrease of hindering job demands: i.e., the adaptation of work-related activities to decrease the existing job demands, typically this situation occurs when employees do not possess sufficient job resources to tackle job demands; 3) increasing structural job resources: it concerns that allow the performance of varied tasks, which promote individual and professional growth, as well as lead to greater autonomy in terms of the work processes; and 4) increase of social job resources: associated with relational phenomena, e.g., social support provided by different sources and feedback received [25]. Recently, [26] integrated the definition proposed by [25] into the elements responsible for increasing work responsibilities to promote job crafting and the components in charge of decreasing the demands imposed by work in preventing job crafting. On the other hand, [27] agglomerated the thinking of [21] with the interpretation of [25] in establishing a principle that encompasses job-creating activities that foster the genesis of roles and resources.

2.2. Job Crafting and Job Performance

Job performance is a term of relevance to which continuous attention is paid to human resources [28]. A work environment that is not adapted to workers will not allow them to achieve the desired performance, i.e., the existence of tasks that do not match the individual's abilities, the absence of appreciation, poorly stipulated deadlines, as well as the absence of autonomy in decision-making and the suggestion of ideas can impact the performance of workers [29].

According to [30], job performance is conceptualized as the individual's ability to perform the activities inherent to his or her functions, using the resources available to accomplish them. The term, in its fullness, is used to evaluate the performance of workers performance regarding their activities [31]. There are three methodologies of performance appraisal, according to [32]: 1) performance evaluation based on output, for example, the number of sales achieved with a particular product; 2) the evaluation of individual performance by supervisors and their managers; 3) individual and constructive self-assessments that assist employees in goal setting. In recent years there has been a rapid progression of job performance as a construct, abandoning a more traditional perspective, focusing on a monotonous work structure characterized by fixed tasks, and embracing a dynamic work configuration that aims at understanding the roles assumed by employees [33].

The competitiveness of the work environment is the main reason for this rise, requiring the orientation of companies to respond to different situational arrangements [34]. This innovative context requires a comprehensive conceptualization of job performance,

encompassing more precisely all behaviours that positively favour the purposes of companies [35]. In this sense, it is worth mentioning in-role performance [36], adaptive performance [37], proactive performance [38], and citizenship behaviours [39]. In a study by [40], with a sample of teachers, the author concluded that job crafting is an essential aspect of teacher performance and should be encouraged by educational managers. These findings led to the formulation of the following hypothesis:

Hypothesis 1: Job crafting establishes a positive association with job performance.

2.3. Job crafting and Work Engagement

Work engagement is a notion that is implemented through a positive and fulfilling state, and that establishes a close association with work, being composed by three dimensions: 1) absorption: workers are unable to detach themselves from work, sometimes they lose track of time because they are immersed in the tasks they are performing [11, 41]; 2) vigour: workers exhibit a high energy pattern, making them more capable and resilient to face work-related problems [25]; and finally, (c) dedication: work is perceived as a source of enthusiasm and challenge [11]. This construct reflects an enduring mental state that transcends the momentary nature of situations, decentralizing their attention to specific circumstances and allowing workers to assimilate a targeted position in organizational support [42]. Engaged workers are characterized by high levels of energy and enthusiasm, which lead to a state of immersion in work-related activities [43]. Numerous studies have been developed around this concept, verifying the existence of differences in work engagement levels through variations in working conditions, personal characteristics, and behavioural strategies [44]. It should be noted that engagement can also fluctuate over time and in various situations. Research has shown that workers tend to be more engaged in challenging activities that have a time constraint [45], on workdays preceded by a good recovery [46], and with access to a wide range of resources [47]. Work engagement arises in challenging situations that require handling personal and work tools assisting the subjects in this perspective [48, 49].

According to several authors, job crafting is one of the predictors of work engagement. These were the results of a study by [50] in which the authors found a significant positive relationship between job crafting and work engagement. Also, this relationship finds support in the propositions defined for the JD-R theory; the existence of job crafting behaviours leads to a motivational process responsible for the development of work engagement [51]. When workers perceive that they have autonomy and competence to perform their work-related tasks, two of the three basic psychological needs proposed by the Self-Determination Theory (SDT; Deci & Ryan, 2000), they will introduce changes in the social and structural aspects of their work. These changes are associated with an increase in job resources and a decrease in job demands. This means that job crafting behaviours promote the motivational cycle of the JD-R model, operationalized by the concept of work engagement (Bakker et al., 2014 [44]; Bakker & Demerouti, 2017 [51]). Job crafting serves as a mechanism for adapting the workplace to make it more adjusted to the competences and skills of workers (Demerouti & Bakker, 2014). This relationship found support in the literature, the quasi-experimental study of van Wingerden et al. (2017 [74]), showed that a job crafting intervention promotes an increase in work engagement. As such, the following hypothesis was formulated:

Hypothesis 2: Job crafting establishes a positive association with work engagement.

2.4. Work engagement e Job Performance

For many authors, work engagement is one of the predictors of job performance because a strong work engagement, characterized by high energy levels, a feeling of enthusiasm during task performance, and a state of immersion during work activities, will lead to a superior performance. In a study conducted by [52] with IT professionals, these

authors concluded that work engagement has a significant positive association with job performance. For [4], when employees feel more energetic and dedicated, they become more compliant, performing their tasks. Previously, in a study conducted in the Netherlands by [53], these authors concluded that elevated levels of work engagement are a good predictor of high performance. Furthermore, as work engagement is a motivational concept, as underlined by [51] and [44], it is expected that it will lead to desired work-related outcomes, such as job performance since workers will be more focused on their tasks, as well as will present more energy and perceive work as a source of meaning, stimulation, and enthusiasm. These aspects led to the development of the following hypothesis:

Hypothesis 3: Work engagement establishes a positive association with job performance.

2.5. Mediating effect of work engagement

As far as empirical research developed around job crafting concerns, it focuses on individual and organizational performance [54-56], changes in employee engagement [57], self-efficacy [21, 58], job attitudes (e.g., organizational commitment and job satisfaction; Rudolph et al., 2017) and well-being [59, 60]. From [43] perspective, the integration of work characteristics and personal resources are predictors of job performance as a direct consequence of expressed commitment. In a study by [40], conducted with education professionals, the mediating effect of work engagement on the relationship between job crafting and job performance was proven. Also, the JD-R supports the mediating role of work engagement on the relationship between job crafting and job performance, the latter construct is one of the work-related outcomes identified by [61] in their critical review of the JD-R model. The relationship between job crafting, work engagement, job attitudes, and job performance has deserved special attention since the latter two constructs are some of the most influential in the organizational literature. Job crafting characterizes workers that modify their jobs and make them more suited to their skills. This fit means that there is greater coherence between the worker and the tasks performed, which will be translated into higher satisfaction, commitment, and performance levels (Rudolph et al., 2017). This association, i.e., between job crafting, job attitudes, and job performance, can be direct (job crafting → job attitudes and job performance; e.g., Cheng & O-Yang, 2018) or indirect (job crafting → mediating variable → job attitudes and job performance; e.g., Demerouti & Bakker, 2014) through work engagement. The direct relationship can be explained through a better fit between the workers' characteristics and tasks performed, while the mediating role of work engagement may indicate that workers that adopt crafting behaviours attribute greater meaning to their work, which makes them more motivated (i.e., engaged) and will lead to increased job attitudes and job performance (Bakker & Demerouti, 2017 [51]; Demerouti & Bakker, 2014). Our goal was to analyse the relationship between job crafting and job performance through work engagement. To this end, the following hypothesis was formulated:

Hypothesis 4: Work engagement mediates the association between job crafting and job performance.

A theoretical model was developed to integrate the hypotheses formulated, where the associations between the different constructs are synthesized.

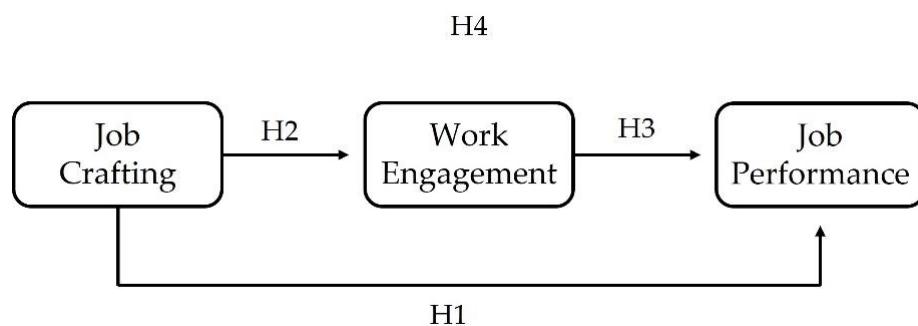


Figure 1. Research Model

3. Method

3.1. Procedure

A total of 453 individuals participated voluntarily in this study, all working in organizations based in Portuguese territory. After the questionnaire was created, it was placed on the Google Forms platform, and the respective link was sent via e-mail or LinkedIn message to the researchers' contacts. Data were collected between April and August 2022. The data collection process followed a non-probabilistic process, intentional and convenient snowball type [62]. In the online questionnaire, participants were informed of the purpose of this study, data confidentiality was guaranteed, and individual responses would never be known since the analysis to be performed would be on all employees. The questionnaire was composed of sociodemographic questions and three self-report scales (job crafting, job performance, and work engagement).

3.2. Participants

Among the 453 participants in this study, 247 (54.5%) are females, whose ages ranged from 20 to 79 years, with a mean age of 37.96 ($SD = 10.96$). Regarding marital status, 191 (42.2%) are single, 220 (48.6%) are married or cohabiting, 38 (8.4%) are divorced, and 4 (0.9%) are widowed. As for their educational background, 70 (15.5%) have a basic education, 142 (31.3%) have a secondary education, 70 (15.5%) have a college degree, 152 (33.6%) a post-graduate degree, and 19 (4.2%) a master's degree. Regarding the type of employment contract, 78 (17.2%) have a fixed-term contract, 303 (66.9%) have an open-ended contract, 35 (7.7%) are self-employed, and 37 (8.2%) have another type of contract. Concerning seniority in the organization, 117 (25.8%) have been working there for one year or less, 188 (41.5%) between one and five years, 64 (14.1%) between five and 10 years, 24 (5.3%) between 10 and 15 years, and 60 (13.2%) with more than 15 years. Among these employees, 368 (81.2%) work in the private sector and 85 (18.8%) in the public sector, with 34 (7.5%) working part-time and 419 (92.5%) full-time. It should also be noted that 197 (43.5%) are exempt from working hours, and 256 (56.5%) are not exempt from working hours.

3.3. Data analysis procedure

The first step was to import the data into SPSS Statistics 28 software (IBM Corp., Armonk, NY, USA). Next, the metric qualities of the instruments used in this study were assessed. The validity of the instruments was evaluated by confirmatory factor analysis (CFA) using AMOS 28 for Windows (IBM Corp., Armonk, NY, USA) software. The procedure was according to a "model generation" logic [63], considering in the analysis of their adjustment, interactively the results obtained: for the chi-square (χ^2) ≤ 5 ; for the Tucker Lewis Index (TLI) $> .90$; for Goodness-of-Fit Index (GFI) $> .90$; for Comparative Fit Index (CFI) $> .90$; for Root Mean Square Error of Approximation (RMSEA) $\leq .08$; Root Mean Square Residual (RMSR). A smaller RMSR value corresponds to a better adjustment [64]. The internal consistency of each scale was then analysed by calculating Cronbach's alpha, whose value

should vary between "0" and "1", not assuming negative values [65] and being higher than .70, the minimum acceptable in organizational studies [66]. Convergent validity (AVE) and composite reliability were also calculated for each instrument. As for the sensitivity study, the different measures of central tendency, dispersion, and distribution were calculated for the different items of the scales, thus conducting the study of normality for all items and the various scales. The hypotheses formulated in this study were assessed through simple and multiple linear regressions.

3.4. Instruments

To measure job crafting, we used the instrument developed by [25], consisting of 21 items rated on a 5-point Likert-type rating scale (from 1 "Never" to 5 "Always"). These 21 items are divided into four dimensions: increasing structural job resources (items 1, 2, 3, 4, and 5); decreasing hindering job demands (items 6, 7, 8, 9, 10, and 11); increasing social job resources (items 12, 13, 14, 15, and 16); and increasing challenging job demands (items 17, 18, 19, 20, and 21). A four-factor CFA was performed, and the adjustment indices obtained were adequate ($\chi^2/df = 2.43$; GFI = 0.92; CFI = 0.94; TLI = 0.92; RMSEA = 0.056; SRMR = 0.067). All dimensions showed good internal consistency, with Cronbach's alpha values between 0.80 and 0.84. Concerning composite reliability, it varied between 0.79 and 0.86. Finally, regarding convergent validity, only the dimension increasing structural job resources presented an AVE higher than 0.50. All other dimensions present values slightly below this value.

To measure job performance, we used the 14 items that make up the task performance and citizenship performance dimensions of the instrument developed by [37], rated on a 5-point Likert-type rating scale (from 1 "strongly disagree" to 5 "strongly agree"). The task performance dimension comprises items 1, 2, 3, 4, 5, 6, and 7, and the citizenship performance dimension comprises items 8, 9, 10, 11, 12, 13, and 14. After two-factor confirmatory factor analysis, it was found that items 6 and 7 had a low factor weight, so they were removed. The adjustment indices obtained were adequate ($\chi^2/df = 1.90$; GFI = 0.97; CFI = 0.98; TLI = 0.98; RMSEA = 0.045; SRMR = 0.034). The two dimensions showed good internal consistency, with Cronbach's alpha of 0.85 for task performance and 0.86 for citizenship performance. Regarding composite reliability, the task performance presented a value of 0.87, and the citizenship performance a value of 0.86. Concerning convergent validity, the task performance presented an AVE value of 0.57, and the citizenship performance a value of 0.48.

To measure the levels of work engagement, we used the reduced version of the instrument developed by [67], consisting of 9 items rated on a 7-point Likert-type rating scale (from 0 "Never" to 6 "Every day"). These nine items are distributed over 3 dimensions: vigour (items 1, 4, and 7); dedication (items 2, 5, and 8); absorption (items 3, 6, and 9). The three-factor confirmatory analysis showed that not all adjustment indices were adequate ($\chi^2/df = 5.00$; GFI = 0.94; CFI = 0.97; TLI = 0.96; RMSEA = 0.094; SRMR = 0.068) and that the three factors were strongly correlated. We then performed a new one-factor confirmatory factor analysis and the adjustment indices proved to be adequate ($\chi^2/df = 3.20$; GFI = 0.97; CFI = 0.98; TLI = 0.98; RMSEA = 0.070; SRMR = 0.049). This instrument showed good internal consistency, with a Cronbach's alpha of 0.93. It also presented composite reliability with a value of 0.94. As for convergent validity, it presents an AVE value of 0.63.

Neither the instruments nor their component items grossly violate normality.

4. Results

The first step was to perform the descriptive statistics of the variables selected to understand if the answers given by the participants, regarding the addressed constructs, were significantly above or below the central point of the scales.

Table 1. Descriptive statistics of the variables under study

Variables	<i>t</i>	<i>p</i>	Mean	<i>SD</i>
Increasing structural job resources	52.35***	< 0.001	4.39	0.56
Decreasing hindering job demands	0.723	0.235	3.03	0.81
Increasing social job resources	2.32*	.010	3.10	0.91
Increasing challenging job demands	25.24***	< 0.001	3.87	0.73
Task performance	64.70***	< 0.001	4.55	0.51
Citizenship performance	33.10***	< 0.001	4.14	0.73
Work engagement	23.38***	< 0.001	5.24	1.13

Note. * $p < 0.05$; *** $p < 0.001$

All job crafting dimensions are significantly above the midpoint of this scale (3), except for decreasing hindering job demands dimension (Table 1). The dimension with the highest average is increasing structural job resources. Concerning job performance, both task performance and citizenship performance are significantly above the midpoint of the scale (3), with task performance being the dimension with the highest mean (Table 1). The levels of work engagement are significantly above the midpoint of the scale (4) (Table 1). These results indicate that, in general, the participants perceived high levels of job crafting and work engagement, as well as high performance.

Next, we assessed the association between the variables through Pearson's correlation coefficient.

The results (Table 2) indicate that increasing structural job resources positively and significantly correlates with task performance, citizenship performance, and work engagement. Increasing social job resources positively and significantly correlates with citizenship performance and work engagement. Increasing challenging job demands positively and significantly correlates with task performance, citizenship performance, and work engagement. Among job crafting dimensions, only decreasing hindering job demands is not significantly associated with the other variables. Finally, work engagement positively and significantly correlates with task performance and citizenship performance.

Table 2. Association between variables under study

	1.1	1.2	1.3	1.4	2.1	2.2	3
1.1. Increasing structural job resources	–						
1.2. Decreasing hindering job demands	-0.04	–					
1.3. Increasing social job resources	0.17***	0.15***	–				
1.4. Increasing challenging job demands	0.56***	-0.03	0.30***	–			
2.1. Task performance	0.44***	-0.03	0.08	0.32***	–		
2.2. Citizenship performance	0.35***	-0.04	0.39***	0.45***	0.30***	–	
3. Work engagement	0.56***	-0.01	0.23***	0.47***	0.28***	0.21***	–

Note. *** $p < 0.001$

4.1. Hypothesis Test

Hypothesis 1: Job crafting establishes a positive association with job performance.

To evaluate hypothesis 1, two multiple linear regressions were performed after testing the respective assumptions.

Table 3. Results of the multiple linear regressions (H1)

Independent variable	Dependent variable	F	p	R ² a	β	p
Increasing structural job resources	Task performance	28.21***	< 0.001	0.19	0.38***	< 0.001
Decreasing hindering job demands					-0.01	0.947
Increasing social job resources					-0.02	0.712
Increasing challenging job demands					0.11*	0.037
Increasing structural job resources	Citizenship performance	47.13***	< 0.001	0.29	0.14**	0.002
Decreasing hindering job demands					-0.07	0.092
Increasing social job resources					0.30***	< 0.001
Increasing challenging job demands					0.28***	< 0.001

Note. * p < 0.05; ** p < 0.01; *** p < 0.001

The results indicate that only increasing structural job resources ($\beta = 0.38; p < 0.001$) and increasing challenging job demands ($\beta = 0.11; p = 0.037$) have a positive and significant association with task performance (Table 3). The model explains 19% of the variability in task performance and is statistically significant ($F(4, 448) = 28.21; p < 0.001$).

Increasing structural job resources ($\beta = 0.14; p = 0.002$), increasing social job resources ($\beta = 0.30; p < 0.001$), and increasing challenging job demands ($\beta = 0.28; p < 0.001$) were also found to have a positive and significant association with citizenship performance (Table 3). The model explains 29% of the variability in citizenship performance and is statistically significant ($F(4, 448) = 47.13; p < 0.001$). This hypothesis was partially confirmed.

Hypothesis 2: Job crafting establishes a positive association with work engagement.

To assess hypothesis 2, a multiple linear regression was performed after confirming the respective assumptions.

Table 4. Multiple linear regression results (H2)

Independent variable	Dependent variable	F	p	R ² a	β	p
Increasing structural job resources	Work engagement	61.82***	< 0.001	0.35	0.43***	< 0.001
Decreasing hindering job demands					-0.01	0.947
Increasing social job resources					0.09*	0.020
Increasing challenging job demands					0.20***	< 0.001

Note. * p < 0.05; *** p < 0.001

The results indicate that increasing structural job resources ($\beta = 0.43; p < 0.001$), increasing social job resources ($\beta = 0.09; p = 0.020$), and increasing challenging job demands ($\beta = 0.20; p < 0.001$) were also found to have a positive and significant association with work engagement (Table 4). The model explains 35% of the variability in work engagement and is statistically significant ($F(4, 448) = 61.82; p < 0.001$) (Table 4). This hypothesis was partially confirmed.

Hypothesis 3: Work engagement establishes a positive association with job performance.

Hypothesis 3 was evaluated using two simple linear regressions after testing the respective assumptions.

Table 5: Simple linear regression results (H3)

Independent variable	Dependent variable	<i>F</i>	<i>p</i>	<i>R</i> ²	β	<i>p</i>
Work engagement	Task performance	37.24***	< 0.001	0.08	0.28***	< 0.001
	Citizenship performance	21.55***	< 0.001	0.05	0.21***	< 0.001

Note. *** $p < 0.001$

The results indicate that work engagement has a positive and significant association with task performance ($\beta = 0.28$; $p < 0.001$). The model explains 8% of the variability in work engagement and is statistically significant ($F(1, 451) = 37.24$; $p < 0.001$) (Table 5). Work engagement has a positive and significant association with citizenship performance ($\beta = 0.21$; $p < 0.001$). The model explains 5% of the variability in work engagement and is statistically significant ($F(1, 451) = 21.55$; $p < 0.001$) (Table 5). This hypothesis is confirmed.

Hypothesis 4: Work engagement mediates the association between job crafting and job performance.

Regarding hypothesis 4, since it presupposes a mediating effect, we followed the conditions defined by [67]. Multiple linear regressions were performed in two steps. In the first step, the predictor variable was introduced as the independent variable, and in the second step, the mediating variable.

Table 6. The mediating effect of engagement on the relationship between increasing structural job resources and job performance

Independent variables	Task Performance		Citizenship Performance	
	B	β	β	β
	Step 1	Step 2	Step 1	Step 2
Increasing structural job resources	0.44***	0.42***	0.35***	0.34***
Work Engagement		0.05		0.02
<i>F</i>	108.10***	54.41***	64.17***	32.13***
<i>R</i> ² a	0.19	0.19	0.12	0.12
<i>R</i> ² Change		0.001		.001

Note. *** $p < 0.001$

The results indicate that work engagement does not mediate either the relationship between increasing structural job resources and task performance or the relationship between increasing structural job resources and work engagement (Table 6).

Table 7. The mediating effect of engagement on the relationship between increasing social job resources and citizenship performance

Independent variables	Citizenship Performance	
	β	β
	Step 1	Step 2
Increasing social job resources	0.39***	0.36***
Work Engagement		0.13**
<i>F</i>	83.00***	46.57***
<i>R</i> ² a	0.15	0.17
<i>R</i> ² Change		0.02**

Note. ** $p < 0.01$; *** $p < 0.001$

Work engagement was found to have a partial mediating effect on the relationship between increasing social job resources and citizenship performance ($\beta = 0.13$; $p = 0.003$) because when the mediating variable was introduced into the regression equation, the association between increasing social job resources and citizenship performance, although still significant, decreased in intensity (Table 7). There is a significant increase of 2% ($p = 0.003$) in the value determination coefficient (Table 7). Sobel's test was then performed using the interactive instrument of [68], in which we obtained a $Z = 3.39$ with a $p < 0.001$, which confirmed the partial mediation effect.

Table 8. The mediating effect of engagement on the relationship between increasing challenging job demands and job performance

Independent variables	Task Performance		Citizenship Performance	
	B	β	β	β
	Step 1	Step 2	Step 1	Step 2
Increasing challenging job demands	0.32***	0.24**	0.45***	0.45***
Work Engagement		0.16**		0.01
<i>F</i>	51.33***	31.38***	115.89***	57.82***
<i>R</i> ² _a	0.10	0.12	0.20	0.20
<i>R</i> ² Change		0.02**		0.001

Note. ** $p < 0.01$; *** $p < 0.001$

Only a partial mediation effect of work engagement was found in the relationship between increasing challenging job demands and task performance ($\beta = 0.16$; $p = 0.002$) because when the mediating variable was introduced into the regression equation, the association between increasing challenging job demands and task performance, although still significant, decreased in intensity (Table 8). There is a significant increase of 2% ($p = 0.002$) in the value of the coefficient of determination (Table 8). Sobel's test was then performed using the interactive instrument of [68], in which we obtained a $Z = 5.45$ with a $p < 0.001$, which confirmed the partial mediation effect. This hypothesis was partially confirmed.

Finally, table 9 was elaborated, where the results of the hypotheses are synthesized, verifying that three were partially confirmed and only one was confirmed.

Table 9. Synthesis of the hypothesis results

	Hypothesis	Decision
H1	Job crafting establishes a positive association with job performance	Partially supported
H2	Job crafting establishes a positive association with work engagement.	Partially supported
H3	Work engagement establishes a positive association with job performance	Supported
H4	Work engagement mediates the association between job crafting and job performance.	Partially supported

5. Discussion

This study aimed to study the mediating effect of work engagement on the relationship between job crafting (increasing structural job resources, decreasing hindering job demands, increasing social job resources, and increasing challenging job demands) and job performance (task performance and citizenship performance) and the direct association between these variables.

First, a positive and significant association between two dimensions of job crafting (increasing structural job resources and increasing challenging job demands) and task performance was confirmed. This means that the structural aspects of work, such as performing varied tasks and the existence of a challenging and stimulating are responsible for increased task performance. In turn, a significant association between the other two dimensions of job crafting (decreasing hindering job demands and increasing social job resources) and task performance was not confirmed. In a study conducted by [69], the results obtained by authors revealed that these two dimensions do not have a significant association with task performance. It was also found that only the dimension decreasing hindering job demands was not significantly associated with citizenship performance. The fact that the decreasing hindering job demands dimension does not have a significant effect on task performance or citizenship performance may be because the participants' responses in this study focused on the central point of the scale, i.e., the neutral point. Again, in a study by [69], these authors found equivalent results. According to Robledo et al. (2019), decreasing hindering job demands might be viewed positively; for example, if I want to perform better, I should give my responsibilities top priority and disregard other demands. However, it can also be viewed negatively by these authors. For example, if I do not like my job, I will not put much effort into it and will attempt to do as little as possible.

Second, only a positive and significant association was confirmed between some dimensions of job crafting (increasing structural job resources, increasing social job resources, and increasing challenging job demands) and work engagement. The decreasing hindering job demands dimension was not significantly associated with work engagement. These results align with the study of [70], in which all dimensions of job crafting were positively and significantly associated with engagement except for decreasing hindering job demands. Also, Hakanen et al. (2018) found identical results in their study. This situation can be explained through the premisses of the JD-R model, where job resources have a positive effect on the motivational process, which leads to work engagement. In this case, workers, by increasing the structural and social resources of their work, will feel more engaged. On the other hand, the fact that there are complex and stimulating tasks will allow individuals to use their work-related skills, to develop a feeling of mastery, which will result in greater work engagement. It should be noted that the dimension with the strongest association with work engagement was increasing structural job resources, followed by increasing challenging job demands and, finally, increasing social job resources. In the study of [70], the two strongest associations were inverse to those found in this study.

Third, we found a positive and significant association between work engagement and task performance, and citizenship performance, i.e., when employees experience high levels of work engagement, they have better task performance and citizenship performance. These results align with what is referred in the literature, e.g., in a study by [40], the author also found a positive and significant association between work engagement and job performance. An engaged worker will put more energy, dedication, and concentration at work, resulting in increased performance in different domains, e.g., task and citizenship performance.

Finally, we only found evidence of the mediating effect of work engagement on the relationship between increasing structural job resources and task performance, and a partial mediating effect between increasing challenging job demands and citizenship performance. These results are partially in line with the results found by other authors, such as [40] and [71]. We conclude that when there are increasing structural job resources, e.g.,

task variety and autonomy in task performance, this fact enhances employees' work engagement, which will lead to better task performance. When demands become increasingly demanding, work engagement levels increase, leading employees to have a higher citizenship performance, often worrying about helping even their colleagues. A job that requires the implantation of knowledge and skills and that makes employees feel challenged and stimulated, will lead to a state of work motivation. This state can be characterized by high energy levels, greater concentration, and more persistence when facing work-related obstacles, allowing better performance. As such, it is through a synergistic action between challenging job demands and work engagement that a greater citizenship performance will emerge.

The strongest relationship between the assessed variables was between one of the dimensions of job crafting (increasing structural job resources) and task performance and work engagement. It should be noted that among the four dimensions of job crafting, this is the one with the highest mean score, which means that the participants in this study consider their contribution to increasing the structural resources of their work to be important.

In sum, organisations need to have employees with elevated levels of job crafting, i.e., who can make changes to establish a balance between job demands and job resources, adjusting them to their needs and skills [24]. If there is a balance between demands and resources, employees will feel more enthusiastic about their work and perform better.

5.1. Limitations

Among the limitations of this study, one must be emphasized the use of a cross-sectional design, which does not allow us to establish causal relationships between the variables under study. To establish causal relationships, we should conduct a longitudinal study. The fact that self-report questionnaires were used is another critical limitation since this type of questionnaire may bias the results obtained. To reduce the impact of common method variance, we followed methodological and statistical recommendations recommended by [72]. Lastly, another limitation of this study is that sociodemographic questions were used only to characterise the sample. It is suggested that a future study should use the activity sector (public or private) or generations as possible moderating variables.

5.2. Practical Implications

One of the strengths of this study is that it has proven the mediating effect of work engagement in the relationship between increasing structural job resources and task performance and in the relationship between increasing challenging job demands and citizenship performance. Thus, it was possible to demonstrate the importance of two of the four dimensions of job crafting, as well as of work engagement, in explaining diverse types of job performance. Furthermore, the synergistic action between these dimensions of job crafting and work engagement has also been shown to promote better task and citizenship performance. As such, organizations and their managers must be aware of the importance of promoting job crafting behaviours and work engagement since these variables, according to the results obtained in this research, can become competitive advantages for organizations.

In times of high competitiveness in the labour market, it becomes necessary that organisations are geared to respond to different situational arrangements [34]. Employees are asked to be proactive, and they must have high levels of job crafting (increasing structural job resources and increasing challenging job demands) to boost their levels of work engagement [70] and, in turn, have a better task performance and citizenship performance [71]. High levels of job crafting can also help workers achieve a longer-lasting sense of well-being by promoting their social, hedonic, and eudaimonic well-being (Devoto et al., 2020), which will raise their levels of engagement and improve their performance. According to a study by Rogala and Cieslak (2019), workers are more likely to exhibit high

levels of job crafting when they experience workplace well-being and a sense of communal flow. Considering the results obtained in this study, organizations should allow workers to develop the skills that foster their personal and professional evaluation (e.g., through training, coaching, or mentoring), which will make them feel high levels of well-being and commitment (Moreira et al., 2022), and improved performance (Kuhail et al., 2020). Also, management must grant workers more freedom during their work process, i.e., greater autonomy, so that each worker can create a balance between job demands and job resources [25, 73, 74], which will lead to higher well-being levels (e.g., work engagement; Rudolph et al., 2017). On the other hand, and to avoid boredom at work, which can have negative outcomes to organizations (e.g., decreased satisfaction and increased absenteeism and turnover), organizations must create stimulating and meaningful tasks, allowing workers to use their work-related skills [73, 74]. Specifically, organizations can introduce surveys to assess the perceived job demands and job resources that exist in the work environment. After this survey, organizations can determine what adjustments are needed in the distinct roles that exist in an organization (Demerouti & Bakker, 2014). Another strategy is to create a job crafting intervention program. For example, workers can assist to lectures that raise their awareness regarding job crafting behaviours. Subsequently, workers from each department can exchange work experiences to understand how their tasks can be adjusted to create a greater person-organization fit (Demerouti & Bakker, 2014). Management can also play a vital role in the promotion of job crafting. Managers can observe how workers perform their tasks and provide feedback on how they can foster job resources and reduce the detrimental effects of job demands Demerouti & Bakker, 2014). Feedback can also have another effect, related to personal resources (e.g., positive psychological capital or PsyCap). By providing feedback, managers will contribute to the increase of workers' self-efficacy beliefs, making them feel more confident in the changes they will perform in their tasks (Newman et al., 2014).

Strategies to foster work engagement can be divided in two groups, related to the work context and directed toward practices outside the workplace. Different systematic literature reviews and meta-analyses (e.g., Knight et al., 2017) have emphasized that organizations should focus on the promotion of job resources and personal resources, and the decrease of job demands. Management may implement job rotation policies; as such, each worker will perform different tasks during certain periods, which will contribute to the decrease of boredom and an increase in the development of work-related skills and work motivation [75]. Another strategy to promote work engagement is through the reduction of job demands, e.g., perceived job insecurity [75]. Also, organizations and managers can foster a healthy work environment, which will facilitate the development of interpersonal relationships and the creation of social support nets, aspects useful during times of higher work pressure [76]. Individual resources can be fostered through interventions related to PsyCap, a second-order construct composed by four state-like dimensions, self-efficacy, resilience, hope, and optimism, which promote desired job-related attitudes and behaviours (e.g., work engagement), and job performance (Newman et al., 2014). Practices that take place outside the work context are related to physical activity, which increases positive emotions and decreases stress levels, and mindfulness (Knight et al., 20167).

It is recommended that HRM implements good human resource management practices, both in terms of skills development of its employees and in terms of more individualized support (Moreira et al., 2022), but that HRM is concerned with verifying if its employees perceive the existence of these practices as HRM would like them to. According to Whitner (2000), good HRM practices often exist, but employees do not perceive them properly.

It is also concluded that in the recruitment and selection phase, the proactivity of candidates should be considered so that they may develop high levels of job crafting, boosting their levels of engagement and leading to an increase in their levels of task performance and citizenship. For this to happen, as mentioned earlier, the organization

should be concerned with the well-being of its employees, developing activities that enhance it, such as meditation.

5. Conclusions

The main conclusion of this study is that work engagement is the mechanism that explains the relationship between increasing structural job resources and task performance and the relationship between increasing challenging job demands and citizenship performance.

The results also indicate that among the four dimensions of job crafting, the one which presents a mean close to the central point is decreasing hindering job demands. This dimension is the only not significantly associated with either work engagement or the job performance dimensions used, task and citizenship. Could it be that employees do not consider decreasing hindering job demands an important aspect to promote work motivation and performance? These results are also in line with the literature, as in previous studies, these were the results obtained [70, 71]. It should be noted that only the dimensions increasing structural job resources and challenging job demands have a significant and positive association with task performance and engagement. However, increasing social job resources is positively and significantly associated with citizenship performance. It was also found that engagement levels are positively associated with both task performance and citizenship performance. Highly engaged workers perform their tasks better and have more citizenship behaviours toward the organisation and their colleagues [8, 53].

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Informed Consent Statement: Written informed consent has been obtained from the patient(s) to publish this paper.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data is not publicly available since in their informed consent, participants were informed that the data was confidential and that individual responses would never be known, as data analysis would be of all participants combined.

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