

How Public Managers Craft their Job? A Proposal for a Job Crafting Intervention in the Public Sector

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Abstract

Studies on job crafting, a bottom-up approach to individual job redesign, have been growing steadily over the last years given the expected positive impact it has on many individual- and organizational-level outcomes. Drawing on the Capability, Opportunity, and Motivation Behavior (COM-B) model, we propose an intervention study and the results of a pilot study among public-sector managers. This research may provide interesting insights into how job crafting is shaped within a highly formalized workplace context, as it has been demonstrated that such a context may prevent people from crafting their job and induce people to have more passive behavior at work. In particular, the pilot study results emphasize the role of relational crafting and shed new light on how job crafting occurs in the public sector.

Key words: job crafting, intervention, public sector.

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1. Introduction

Job crafting (JC) is a do-it-yourself, spontaneous, and proactive approach that highlights how individuals make significant changes in the way they do their jobs (Wrzesniewski & Dutton, 2001). More specifically, JC captures “the physical and cognitive changes individuals make in the task or relational boundaries of their work” (Wrzesniewski & Dutton, 2001: 179). It consists of proactive behaviors that enable workers to modify their jobs in order to meet their needs and preferences in the workplace (Tims & Bakker, 2010). These actions are undertaken from a bottom-up perspective generating greater work engagement and higher performance (Tims, Bakker, & Derks, 2013) and, if employers recognize their importance, they may guide workers towards more positive actions (Petrou, Demerouti, Peeters, Schaufeli, & Hetland, 2012). Indeed, several studies show that JC benefits individuals’ work engagement (Lichtenthaler & Fischbach, 2019), job satisfaction (Cheng, Chen, Teng, & Yen, 2016), person-job fit (Bakker & Oerlemans, 2019), and psychological and subjective well-being (Slemp, Kern, & Vella-Brodrick, 2015). Conversely, it prevents individual negative emotions, such as burnout (Cheng & Yi, 2018), job boredom (Harju, Schaufeli, & Hakanen, 2018), physical complaints and depression (Kim & Beehr, 2018), and job strain (Rudolph, Katz, Lavigne, & Zacher, 2017). Furthermore, the organization benefits of JC can be traced in increased task performance and organizational commitment (Bakker, Tims, & Derks, 2012; Petrou, Demerouti, & Schaufeli, 2015).

Research has identified three main JC strategies (Wrzesniewski & Dutton, 2001): task crafting, referring to all the initiatives that result in a change in the number, scope, or type of job tasks; relational crafting, involving changing the quality and quantity of interactions with others at work; cognitive crafting, regarding changes in the way one approaches or views the job.

Over the years, research on this topic has increased steadily, and a new conceptualization of JC emerged; particularly, the new approach refers to the modifications in the characteristics of the physical, organizational, and social aspects of a job in order to balance the job demands and the job resources (JD-R, Petrou et al., 2012; Tims et al., 2012). Job demands refer to the aspects of the job that require an employee’s effort, while job resources refer to the aspects of the job that help individuals addressing job demands and providing opportunities for learning and development.

Although there are conceptual differences between the two approaches, the literature has often tried to link the two perspectives defining JC as a self-initiated and pro-self-focused change (e.g., Bruning & Campion, 2018; Zhang & Parker, 2019) leading to positive outcomes for employees but also for the organization.

Given the positive outcomes associated with this behavior, scholars have begun to develop several interventions aimed at helping workers craft their jobs in order to experience joy and engagement at work (Demerouti, Peeters, & van den Heuvel, 2019; Devotto & Wechsler, 2019). JC interventions are intentional activities or methods designed to inspire such behaviors in employees. The literature on this

methodology is growing significantly since, although JC is a self-initiated behavior, it can be triggered by organizational and managerial actions (van Wingerden, Bakker, & Derks, 2017). Early attempts to foster JC via training interventions include Berg, Dutton, Wrzesniewski, and Baker's (2008) Michigan job crafting exercise, which tries to stimulate workers to change their tasks, relations, and cognition, and van den Heuvel, Demerouti, and Peeters' study (2015), which intervention tried to increase job resources and challenges and to reduce job demands. Usually, interventions that build on the first conceptualization of JC tend to emphasize the fit between person and job (Kooij, van Woerkom, Wilkenloh, Dorenbosch, & Denissen, 2017), while other approaches focus on hindering and challenging job demands and resources (van den Heuvel et al., 2015). Although the interventions may differ according to how goals are set (Oprea, Barzin, Vîrgă, Iliescu, & Rusu, 2019), the scheme is often similar and follows four phases: (i) a preliminary moment of interviews with workers and relevant stakeholders (e.g., supervisors) to understand the job type and context; (ii) an in-person workshop in which a JC expert explains how it works to a small group of participants who set some JC goals; (iii) a third phase, typically lasting four weeks, in which participants try to achieve the set goals with weekly JC experiments; (iv) a final moment of debriefing and feedback on the positive and negative outcomes of the process with a view to the future (Demerouti et al., 2019).

According to Demerouti and colleagues (2019), JC interventions draw from the social cognitive theory (Bandura, 1989) – according to which individuals, through goal setting, self-monitoring, social support, and feedback, succeed in learning – and from experiential learning theory (Kolb, Boyatzis, & Mainemelis, 2001) – according to which learning arises from past experiences influencing future behaviors. JC interventions are effective in stimulating all the JC strategies, while also achieving positive outcomes for individuals; some examples are self-efficacy, engagement, task performance (Oprea et al., 2019; van Wingerden, Bakker, & Derks, 2017), and resilience to face change (Gordon, Demerouti, Le Blanc, Bakker, Bipp, & Verhagen, 2018), also for unemployed individuals, who leverage these strategies to improve job search (Hulshof, Demerouti, & Le Blanc, 2020).

In this paper we propose the overall research design of a JC intervention involving public managers. The public sector is currently involved in many relevant challenges (e.g., ageing, technology, personalization of services) that can increase the number of job demands and, as a consequence, may negatively affect employees' well-being (Audenaert et al., 2020). Moreover, this context is characterized by the need to continually ensure that the job is done according to prescribed procedures, which can potentially prevent JC (Berg, Wrzesniewski, & Dutton, 2010). Therefore, developing JC behaviors is of the utmost importance for public organizations because it can help mitigate the negative effects of high job demands on employees' well-being (Audenaert et al., 2020). However, despite the specific relevance of job crafting in the public sector, little is known about the determinants of job crafting – and especially about JC intervention – in this specific context (for an exception, see Audenaert et al., 2020; Bakker, 2015; Demerouti et al., 2017). In order to address this research gap, this study proposes to investigate the capabilities, opportunities,

and motivations that managers have in crafting their job following a training intervention. Moreover, the results of a pilot study among public-sector managers are presented – the main data collection is still in progress – in order to refine the research goal and methodology of the study, to determine the feasibility of the research idea through a qualitative and quantitative survey, and to open a new line of study related to an understudied topic.

2. Theoretical framework

The Capabilities, Opportunities, Motivations, Behavior (COM-B) model (Michie, Van Stralen, & West, 2011) has been used extensively to inform intervention design addressing behavioral changes but, as far as we know, it has never been applied to JC. The COM-B is designed to provide an overarching model that captures all the factors known to influence behavior changes (Michie, Atkins, & West, 2014). This is an appropriate framework for designing a behavioral change intervention since it comprises three main components that are hypothesized to drive behaviors. Indeed, it posits that behavioral changes (B) are possible if people have physical (e.g., having the skills or strength) and psychological (e.g., comprehension and reasoning) capabilities (C), if there are physical (e.g., time and resources) and social (e.g., interpersonal influences, social cues) opportunities (O), and if they have either reflective (conscious intentions, plans, and making evaluations) or automatic (emotional reactions, impulses, and desires) motivation (Michie et al., 2011, 2014).

More specifically, the COM-B model assumes that a given intervention might change one or more components in the behavior system. Therefore, to obtain a specific behavioral transformation in each context it is necessary to identify which components or combinations of components could affect the required change.

Although JC is a self-initiated behavior, it can be fostered by specific contextual factors (Lazazzara, Tims, & De Gennaro, 2020). Since our study is focused on a very peculiar and understudied sector in the JC literature, namely public sector, we believe that integrating such specificities is extremely important in order to increase public manager's chances to further change their JC behaviors.

First, according to the COM-B framework, we believe that a JC intervention can increase the necessary knowledge and skills public managers need to apply JC so enhancing their capabilities. Indeed, JC interventions include some background theories on the JD-R model (Demerouti & Bakker, 2011) and JC (Wrzesniewski & Dutton, 2001) and several exercises and JC examples and strategies designed to build awareness about the public working environment. In this way, participants may increase their knowledge about JC as a concept, but they also can learn practical ways of modifying their job; so that they can prepare their own personal crafting plan and developing their JC skills in the following weeks.

HP1: A job crafting intervention is able to stimulate the capabilities needed to implement job crafting behaviors.

Second, as regards opportunities to implement JC behaviors in the public sector, both physical and social opportunities should be considered. An organizational

(physical) factor that may influence JC behaviors is how much an organization is perceived as driven by rules, regulations, and procedures. Although public managers have formal autonomy and power in how and when to conduct their work, they can feel limited by the obligation to continually ensure they are working according to the prescribed procedures characterizing the public context (Berg et al., 2010). Public organizations push hard to formalize the behavior of their employees and managers, and for this reason they are called bureaucratic (Kurland & Egan, 1999). In fact, one of the defining characteristics of the public sector is the standardization of individual job positions, i.e., a clear definition of the task, workflows, and the rules and regulations to be followed. In this type of organization, the behavior of the worker is regulated and therefore, since what he or she does and how he or she does it is decided by others, there is a vertical specialization through which a reduction of variables is achieved, and the work becomes predictable and controllable (Sievert, Vogel, & Feeney, 2020). Formalization therefore leads the organization to be precise and orderly. By establishing the who, what, and how for individual positions, the basic building blocks are set on which the organization must then base its macrostructure. Therefore, formalization may represent a factor that alters the way in which public managers perceive they can change their JC behavior.

HP2: The lesser the formalization, the greater the likelihood that an individual will implement job crafting behaviors following an intervention.

A social opportunity is related to empowering leaders that can optimize working conditions for JC behaviour (Audenaert et al., 2020). Empowering leadership refers to behaviors involving delegating, fostering responsibilities, providing autonomy and authority, promoting participation in decision-making, expressing confidence in high performance, through coaching and modeling (Vecchio, Justin, & Pearce, 2010). This type of leadership emphasizes a top-down transfer of authority, autonomy, and responsibility, thus enhancing employees' adaptability to their work circumstances (Gao, Janssen, & Shi, 2011). Empowering leadership means that the leader is also a coach capable of stimulating the personal growth of his or her team, increasing employees' confidence, initiative, and responsibility (Arnold, Arad, Rhoades, & Drasgow, 2000). The leader in question must possess high emotional and social intelligence, combined with good interpersonal skills. In this way, empowered teams are promoted: autonomous teams in which individuals increase their level of interdependence and responsibility. The leader, in these teams, has a role more of facilitator than of guide and direction, supporting the group in the full expression of its potential. The organizational model based on empowerment promotes the participation and involvement of all staff, widespread responsibility, self-esteem, collaboration, and mutual appreciation. The individual, in this organizational perspective, has confidence in his or her own possibilities, is not afraid of change but is committed to managing it, is willing to take risks, recognizes his or her mistakes without fear of others' judgment, takes initiatives. Having these as goals, empowerment represents a revolution in traditional organizational relationships (Cheong, Yammarino, Dionne, Spain, & Tsai, 2019). One of the pivots of this change is the leader, who must become capable of sharing decisions, stimulating autonomy and a sense of responsibility, identifying the needs (educational, relational, and

existential) of his or her collaborators and encouraging their professional growth. Above all, an empowering leader must be able to delegate, to promote the creation of autonomous work groups that establish organizational times and models, relationships with other groups, shifts and meetings, while sharing the company's strategy. The empowerment of the individual then becomes the empowerment of the organization, with the consequent economic and other benefits. This may constitute an important social opportunity, especially in the public sector where employees are required to apply proactive strategies to adapt to their job in order to face current challenges and conflicting demands.

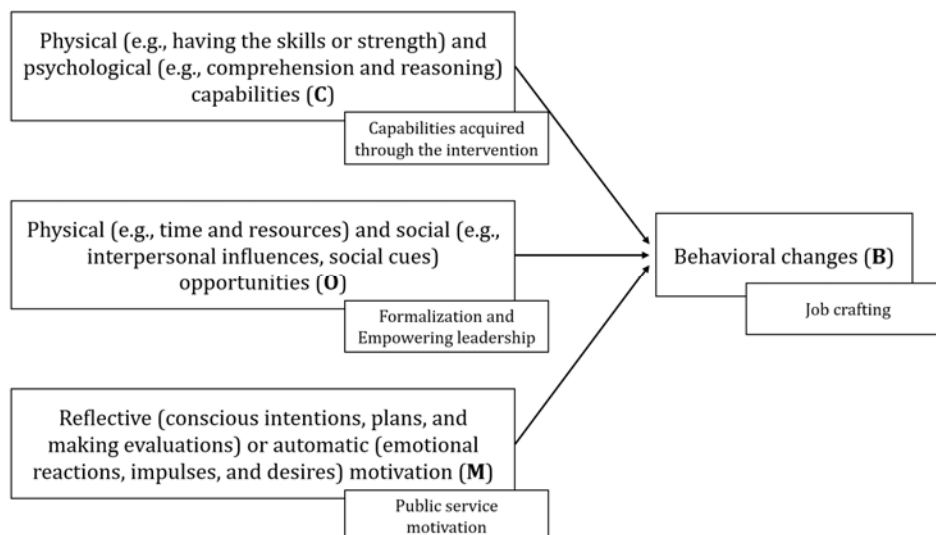
HP3: The greater the level of empowering leadership, the greater the likelihood that an individual will engage in job crafting behaviors following an intervention.

Finally, at the motivational level, public employees are characterized by a prosocial motivational force oriented toward the public mission called public service motivation (PSM). PSM has been defined as "the belief, values and attitudes that go beyond self-interest and organizational interest, that concerns the interest of a larger political entity and that motivates individuals to act accordingly whenever appropriate" (Vandenabeele, 2007: 549). PSM is a form of motivation that refers to an individual's desire to contribute to society. More specifically, Perry and Hondeghem (2008) define PSM as an individual's orientation toward providing services to people with the purpose of doing good for others and society. Thus, the primary reference point is the collective, i.e., the community, organization, or broader society. In particular, the concept of PSM, which has been popular in management literature since the early 1990s, is based on the idea that the motives that drive people to act, engage, and direct organizational choices, efforts, and behaviors are different depending on the sector in which those individuals operate, differentiating between the public and private sectors. Perry (1996), in particular, identifies four dimensions that determine PSM: (1) attraction to policy-making, namely the desire to satisfy one's personal needs while also serving the community; (2) commitment to the public interest, namely the altruistic desire to serve public interests, even when experienced as a "social obligation"; (3) compassion, namely the love for others and the desire to make them feel protected, as well as the duty to protect all those basic rights guaranteed by law; and (4) self-sacrifice, namely the propensity to provide services for other people, forgoing tangible personal rewards. The higher the level of individual PSM, the better the individual outcomes (Perry & Hondeghem, 2008). Public services per se have a pro-social connotation characterized, among other things, by aspects such as high task significance and centrality of values such as compassion, self-sacrifice, and commitment to the public interest. In this sense, in public organizations, personnel with high levels of PSM would be less stimulated by monetary incentives in the qualitative-quantitative increase of their work. Thus, PSM may drive public managers to respond more strongly to JC interventions aimed to alter their behaviors in order to support their organizations and the citizens.

HP4: The greater the public service motivation, the greater the likelihood that an individual will engage in job crafting behaviors following an intervention.

Figure 1 summarizes the various dimensions of the COM-B model that we include in our research model.

Figure n. 1 - Research model and variables



3. Method

Our research design comprises a training intervention and pre- and post-intervention measurements. The training intervention on JC has been designed according to the most frequent JC intervention model in the literature (Oprea et al., 2019). In this section, we will describe the overall research procedure and will present the results of a pilot study.

3.1 Research design and procedure

This study will be conducted in the context of a training activity on the topic of motivation at work addressing Italian public managers belonging to different administrations. The sample will be therefore composed of public managers, which represent a suitable sample for our study. In fact, Berg and colleagues (2010) demonstrated that high-rank workers in the public sector experience the same behavioral dynamics as low-rank employees in the private sector, because of the perception of low opportunity they could craft their job resources due to the highly formalized context they are embedded in.

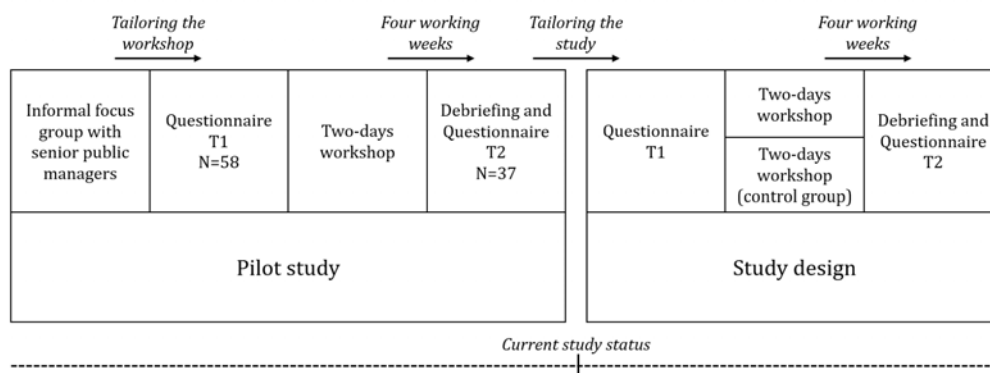
The research design includes several steps. First, the authors have already conducted an informal focus group with five senior managers from a public

administration in order to try to get into the issues of JC, job resources, and the experience of change; the resulting information has been used to tailor the workshop. In a second moment, an online two-days' workshop will be conducted in which the participants will be explained what JC and JC goals will be set. An initial questionnaire will be administered the week before the workshop (T1). Then, the participants will try to achieve the defined JC goals in the following 4 working weeks; in order to retain managers and ensure a good attendance rate, weekly email reminders will be sent to participants. Finally, there will be a debriefing: 30 days after the workshop participants will be asked to fill out a slightly modified questionnaire again (T2). A group of public-sector managers receiving training on another managerial topic will be enrolled as control group which will allow for verification of the study results by eliminating cross-contaminations (Demerouti, Xanthopoulou, Petrou, & Karagkounis, 2017). Participants in both groups will be assessed twice: before the JC training workshop (T1) and four weeks later (T2).

Before running the study described above, a pilot study has already been conducted in order to better define our research goals, fine-tune the online intervention design and scales adopted, and to get some preliminary insights about our hypothesis. Public managers were involved as part of a training initiative on the topics of work motivation and leadership.

Figure 2 describes our research design.

Figure n. 2 - Research design



3.2 Pilot study participants

Public managers participating in the first workshop of our pilot study and thus filling in the initial questionnaire (T1) were 58, on average they were 53 years old (SD = 7.58) and 49% were women. A total of 37 public managers answered to both the pre-intervention and the post-intervention surveys. A series of independent-sample t-tests showed that the two groups did not differ particularly with respect to demographic characteristics or study variables. For the pilot study, we cannot rely on a control group.

3.3 Measures

The survey was administered to participants in the Italian language. For those scales that were not already validated in Italian, we followed the back-translation procedure recommended by Brislin (1970).

Job crafting was measured at T1 and T2 with the 21-items Job Crafting Scale by Tims et al. (2012). A sample item is “I regularly take on extra tasks even though I do not receive extra salary for them”.

Empowering leadership was measured at T1 with the 24-items Empowering Leadership Scale by Amundsen and Martinsen (2014). A sample item is “My leader encourages me to start tasks on my own initiative”.

Formalization was measured at T1 with 5 items from Patterson et al.’s (2012) Formalization Scale. A sample item is “It is considered extremely important here to follow the rules”.

Public service motivation was measured at T1 with 10 items from the Public Service Motivation Scale by Perry (1996). A sample item is “Meaningful public service is very important to me”.

4. Analysis and results

Means, standard deviations (SD), and other statistical values related to the study variables are reported in Table 1.

Table n. 1 - Descriptive values of the study variables

Variable	N	Mean	SD	Median	Skewness	Kurtosis
Job Crafting (T1)	37	3,578	0,674	3,556	0,384	0,105
Job Crafting (T2)	37	3,595	0,636	3,619	0,333	-0,134
Job Crafting - Decreasing hindering job demands (T1)	37	2,850	0,862	2,500	1,115	0,955
Job Crafting - Decreasing hindering job demands (T2)	37	3,908	0,547	4,000	-0,451	0,909
Job Crafting - Increasing challenging job demands (T1)	37	3,924	0,887	4,000	-0,664	-0,407
Job Crafting - Increasing challenging job demands (T2)	37	3,374	0,757	3,400	0,331	-0,320

Job Crafting - Increasing social job resources (T1)	37	3,231	1,003	3,000	0,194	-0,681
Job Crafting - Increasing social job resources (T2)	37	3,617	0,853	3,800	-0,313	-0,881
Job Crafting - Increasing structural job resources (T1)	37	4,423	0,668	4,600	-1,511	1,623
Job Crafting - Increasing structural job resources (T2)	37	3,426	0,808	3,400	0,292	-0,474
Job Formalization	37	3,989	0,810	4,000	-0,747	0,414
Empowering Leadership	37	3,661	0,920	3,650	-0,574	0,322
Public Service Motivation - Compassion	37	3,771	0,675	3,667	0,151	-0,740
Public Service Motivation - Attraction to policy making	37	2,848	0,905	3,000	0,881	0,824
Public Service Motivation - Commitment to public service	37	4,393	0,654	4,750	-1,006	0,136

Table 2 presents the correlations among the variables.

Table n. 2 - Correlations among study variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Job Crafting (T1)	-													
2. Job Crafting (T2)	0,64*	-												
3. Job Crafting - Decreasing hindering job demands (T1)	0,66*	0,49	-											
4. Job Crafting - Decreasing hindering job demands (T2)	0,55	0,87**	0,34	-										
5. Job Crafting - Increasing challenging job demands (T1)	0,85**	0,51	0,28	0,50	-									
6. Job Crafting - Increasing challenging job demands (T2)	0,51	0,90**	0,45	0,70**	0,45	-								
7. Job Crafting - Increasing social job resources (T1)	0,87**	0,59*	0,45	0,44	0,70**	0,41	-							
8. Job Crafting - Increasing social job resources (T2)	0,61*	0,88**	0,34	0,67**	0,58	0,78**	0,62*	-						
9. Job Crafting - Increasing structural job resources (T1)	0,76**	0,39	0,21	0,47	0,78**	0,26	0,55	0,37	-					
10. Job Crafting - Increasing structural job resources (T2)	0,54	0,83**	0,55	0,68**	0,27	0,64*	0,55	0,58	0,28	-				

11. Formalization	0,68**	0,21	0,39	0,20	0,63*	0,16	0,57	0,21	0,56	0,19	-			
12. Empowering Leadership	0,73**	0,30	0,36	0,3	0,62*	0,14	0,74**	0,24	0,59	0,38	0,62*	-		
13. PSM - Compassion	0,32	0,27	0,10	0,36	0,41	0,21	0,23	0,31	0,29	0,08	0,20	0,19	-	
14. PSM - Attraction to policy making	0,23	0,20	0,14	0,23	0,23	0,14	0,28	0,15	0,06	0,17	0,19	0,15	0,09	-
15. PSM - Commitment to public service	0,51	0,52	0,20	0,49	0,38	0,31	0,53	0,49	0,54	0,54	0,15	0,35	0,20	0,07

$n=37$; ** $p<0.01$; * $p<0.05$; PSM=Public Service Motivation.

With reference to the antecedent variables identified in this study, the correlation table shows significant relationships between Formalization and JC (T1) (0.68**) although there is no significance at T2 (0.21) and the same values can be seen with reference to Empowering leadership (T1 equal to 0.73** and T2 equal to 0.30). None of the values related to Public Service Motivation show instead significant values with the JC at T1 or T2. By investigating more in detail, the correlations with the four dimensions of the JC construct, it is possible to ascertain that Formalization has a positive and significant correlation only with Increasing challenging job demands (T1) (0.63*) and not with the same dimension at T2. Empowering leadership also does not show significant correlations with the dimensions of the JC at T2, but only with Increasing challenging job demands (T1) (0.62*) and with Increasing social job resources (T1) (0.74**). Nevertheless, since this is a pilot study and it refers to a sample of 35 respondents at T1 and T2, it is useful at this stage to report just data on the effectiveness of the JC intervention based on pre- and post- measurements, leaving out the relationships between the antecedent variables that would need a larger sample to ensure the methodological rigor of the results.

With reference to results related to t-tests, data suggest that there is a slight increase in JC behaviors after the administration of the intervention. In particular, the difference in JC values at T1 and T2 is greater than 0, more precisely equal to 0.02504171 – although this relationship is not significant ($t = 0.28497$, $df = 37$, $p\text{-value} = 0.3886$). Thus, the data do not support the first hypothesis that a JC intervention has a positive and direct effect on JC behaviors by public managers.

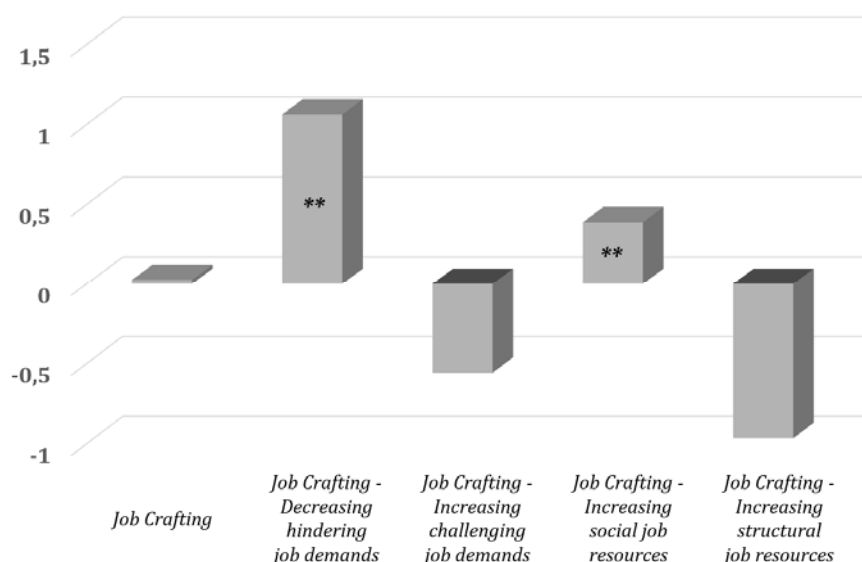
To analyze in more detail JC changes after the intervention, we focused on the four JC dimensions independently. Regarding decreasing hindering job demands, it is possible to appreciate a considerable increase in the average results between T1 and T2, equal to 1.061404, and this value is significant ($t = 7.8576$, $df = 37$, $p\text{-value} = 0.00000$), so it is possible to say that the JC intervention has motivated individuals to reduce non-stimulating or boring activities at work.

Another significant value is related to increasing social job resources. In fact, there is a difference between the T1 and T2 averages which is greater than 0, specifically equal to 0.3868421, and this value is significant ($t = 3.0087$, $df = 37$, $p\text{-value} = 0.00235$). Therefore, it is possible to state that, thanks to the JC intervention, public workers have implemented a series of social strategies related to JC.

Non-significant results were found for the other two dimensions of JC. With reference to increasing challenging job demands, the negative value of -0.5578947 is not significant ($t = -4.0601$, $df = 37$, $p\text{-value} = 0.9999$) and the same can be said with reference to the -0.9657895-value relative to increasing structural job resources ($t = -6.4621$, $df = 37$, $p\text{-value} = 1$). It is therefore possible to affirm that the JC intervention did not influence the willingness to increase structural or motivating tasks to be carried out on the job.

Figure 3 graphically describes the results of the t-test analysis reporting the differences between pre and post measurement intervention.

Figure n. 3 - T-test analysis reporting the differences in mean between T1 and T2



5. Discussion

Although we have presented the results of a pilot study, we believe this article may offer interesting contributions to develop further JC interventions in the public sector.

First, we believe that our research, which uses an intervention to study JC antecedents in the public sector, may provide interesting insights in terms of how JC is shaped within a highly prescribed context. Indeed, due to the need to adhere to rules, regulations, and procedures, it could be possible that public managers will be more likely to activate change in terms of social job resources rather than structural job resources or challenging job demands. This unexpected result reinforces our idea to focus on relational crafting as the most effective strategy that employees in the public sector may use to modify their job and increase their satisfaction. Relational crafting is the process through which individuals seek to enhancing the

quality of their daily social interactions with colleagues, supervisors, and/or clients to experience meaningful relationships at work (Wrzesniewski & Dutton, 2001). Public workers work in a highly formalized context that does not guarantee much autonomy in the execution of tasks, so in order to implement JC they could reshape their work relationships in order to both increase their fit with the job and in order to create the preconditions for other forms of JC. Indeed, due to the standardized nature of their role, before making any change in the way they perform their tasks, they should have peers or supervisors' support. This represents an important contribution, because it confirms that the context is a fundamental trigger of different JC forms (Lazazzara, Tims & de Gennaro, 2020).

Moreover, given the increasing evidence on the positive consequences of JC, it is now more than ever important to explore how to induce JC and benefiting from it even in underexplored context such as the public sector. In this vein, the adoption of the COM-B model in the exploration of behavior changes interventions and the specific focus on three contextual antecedents – i.e., empowering leadership, public service motivation, and formalization – represent an important theoretical contribution since it will be shown that JC occur only when the person involved has the capability, opportunity, and motivation to engage in the specific JC behavior in the public sector context.

A final contribution is related to the bulk of studies on the effectiveness of JC training interventions. Indeed, despite the growing number of studies on JC interventions, still more evidence is needed to assess their effectiveness. This study is no exception, and the results point in mixed directions. In fact, it is possible to argue that the JC intervention in this case did not stimulate any increase in stimulating and motivating activities by workers, and this would suggest that there was no effectiveness in this process. On the contrary, the results on the reduction of boring activities and especially on the increase of relational JC activities suggest that the intervention may have a strong effectiveness even if the results are not easily measurable. In highly formalized contexts, it is possible that the JC intervention affects less visible behavioral dynamics than task performance, such as the social relationships or the cognitive perceptions of the job.

Despite numerous studies on the topic, our research shows some shortcomings. First, all the interventions implemented so far have been face-to-face (Verelst et al., 2020), limiting all the digital and distance possibilities that see e-learning as a critical tool for companies, generating cost-effectiveness and just-in-time availability (Forbes, Gutierrez, & Johnson, 2018). The JC training used in this study has been administered online (during the COVID pandemic) using synchronous conferencing among the participants and the trainers; this innovation adds interest for future research, opening new possibilities for administering JC interventions even at a distance. In addition, as the next step of the study, we also intend to develop a smartphone app through which to conduct the training asynchronously and in such a way as to constantly monitor – during the 4-week “exercise” on JC – the progress and behaviors of workers. The use of technological tools can help the monitoring of job crafting activities in a more precise way.

Furthermore, the impact of JC interventions is largely unknown (Gordon *et al.*, 2018; Sakuraya, Shimazu, Imamura, Namba, & Kawakami, 2016); indeed, some authors fail to clarify whether the effects are positive or negative and the literature need to explore this issue further (Demerouti, Soyer, Vakola, & Xanthopoulou, 2020), also by investigating the negative effects on colleagues or working teams (Oprea *et al.*, 2019).

Moreover, future research should focus more on cognitive JC, so as not to “lose sight” of any of the behavioral dynamics of individuals – whether positive or negative. Indeed, according to our results about relational JC, it could be argued that highly formalized contexts also stimulate other hidden JC behaviors on the part of workers. Cognitive crafting is the process through which individuals seek to reshape the perception and scope of their job to emphasize its value and potential contribution to the self, the organization, and the entire community (Buonocore, de Gennaro, Russo, & Salvatore, 2020). Research on JC has overstated the emphasis on task and relational crafting, underestimating cognitive modifications (Rudolph *et al.*, 2017; Zhang & Parker, 2019), and numerous scales – including the one used in this study – don’t even measure this component (Lazazzara *et al.*, 2020; Weseler & Niessen, 2016). In contrast, cognitive JC is thought to be the first moment in the JC process (Niessen, Weseler, & Kostova, 2016; Yin, Sun, & Chen, 2017) and represents an important strategy to modify jobs where there is little opportunity for other forms of JC (Zhang & Parker, 2019). Future research should therefore investigate this component to understand how and if JC interventions stimulate changes in workers’ cognitive dimensions in the case of highly formalized contexts.

Finally, intervention studies have been mainly conducted in the The Netherlands and in the private context (Demerouti *et al.*, 2019; Hulshof *et al.*, 2020). The intervention design described in this paper is based in the Italian public context, thus contributing to enlarge the applicability of the results demonstrated so far.

The practical implications of this study relate to the possibility for public organizations to stimulate JC behaviors in their employees at any level by designing JC interventions and so directing workers’ behaviors toward desired routes and outputs. In particular, a very interesting insight that this study suggests is that public managers behave like job crafters. First, it is important for the top leadership of the organization to exercise behavioral leadership that does not interfere with the management, allowing the individual to make all kinds of decisions and minimizing the involvement of the apex spheres. Empowering leadership works well with people who are very capable and motivated to make decisions on their own and where strong central coordination is not required, especially when the middle management has most of the information needed to make decisions. In addition, proactive behaviors can take place in different types of work, even where more or less autonomy (e.g., formalization) is experienced. Being able to count on a group of managers who are qualified, competent, and, above all, have autonomy and management skills is a priority for companies, especially in modern work environments characterized by a greater need to operate out of the office and organize themselves even remotely, being able to control their tasks autonomously. Helping public sector executives gain more autonomy and independence, however,

may not be easy if the trend is to limit delegation and not allow enough freedom of action. Some strategies to adopt could be delegation of responsibility, entrusting a manager to manage a project independently in the dynamics of controlling time and resources, scheduling deadlines, and choosing priorities; reducing uncertainty, setting up clear and open communication, providing as much information as possible in order to facilitate work; and building on strengths, to get the best out of managers and foster their self-esteem. Workers need to know the dynamics of JC and should experience sufficient autonomy to craft the task, relational, and cognitive boundaries of their job. This is possible through initiatives such as social support from the public administration (Rafferty & Griffin, 2006), so that JC self-management strategies can be activated by workers at all levels (Zeijen, Peeters, & Hakanen, 2018) in every work context.

6. Conclusion

This is one of the first studies on JC that focuses on public management, particularly focusing on JC antecedents, which are an under-investigated topic in the literature. The possibility that managers in the public sector modify their job after a JC intervention, mainly at the relation level, is a very interesting suggestion that, if supported, may open very interesting scenarios in JC literature and provide useful solutions to support the motivation of employees in Public Administration.

Public organizations may stimulate JC behaviors in their employees also intervening on work organization in order to allow more autonomy and create the conditions for job crafting activities.

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