Review

The Impact of Social Factors on Job Crafting: A Meta-analysis and Review

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Abstract: Researchers often focus on job characteristics and individual differences in job crafting research, however, the influence of social factors on job crafting has not been well-acknowledged. This meta-analysis estimates the associations between social factors and job crafting, and how social factors contribute to employee outcomes through their job crafting. Based on a sample of 51 empirical studies that included 54 independent effect sizes (N = 17,863), we found that social factors of positive leadership styles (e.g., empowering and transformational) and coworker support were positively related to employee job crafting. Further, our study showed that employee job crafting positively mediate the relationships between social factors and work outcomes (e.g., job performance and well-being). Our study contributes to job crafting literature by integrating social factors into the job crafting model and demonstrating that the social context of work (in particular organizational-insiders) play a crucial role in shaping employees' job crafting behavior. We also emphasize the critical role that job crafting plays in transmitting valuable social resources into improved work outcomes. Building on our results, we provide future direction for job crafting research and discuss how our results can imply practice in terms of job crafting training.

Keywords: job crafting; meta-analysis; leadership; social factors

0. Introduction

Job crafting, referring to actions employees take to change the task, relation, or cognitive boundaries of a job [1,2], has been a focal research topic in job design literature since the early 2000s [3]. Employees' initiated job crafting behavior (e.g., seeking resources and seeking challenges) has been positively linked to employee health, job attitude (e.g., job satisfaction), well-being (e.g., work engagement), and performance (for meta-analytic reviews, see [4,5]). It also brings substantial benefits for organizations, such as a higher level of the group and organizational performance [6]. Accordingly, increasing research has investigated various ways to stimulate employees' job crafting behavior. In this respect, cumulative evidence has shown that job characteristics and personal traits are important factors that influence employee job crafting (for reviews, see [4,7]). For example, proactive personality [8], self-efficacy [9], regulatory focus [5], job autonomy [4], and job resources [10] were positively related to employee job crafting.

While prior studies have provided valuable insights into how personal traits/abilities and job characteristics linked to employee job crafting [4,7], research to date has overlooked the social context of job crafting. Social elements of work may play a crucial role in influencing employees' behavior [11]. Social factors represent social connections that employees may access in work domains and non-work

domains [12]. In particular, the interpersonal interactions with organizational insiders (e.g., supervisors and coworkers) and outsiders (such as customers, clients, friends, families, and patients) may impact employee's job crafting behavior [13–15]. Research indicates that the interactive societal environment encompasses opportunities and resources that are vital to foster individual self-growth, career success, and need satisfaction [16,17]. Despite its importance, there has been no recent study that systematically integrates the various social-elements antecedents of job crafting and how employee job crafting converts various social factors into work outcomes.

Our study aims to provide a meta-analytic review of the associations between social factors and employee job crafting and uncover how job crafting acts as a mediator linking social factors and work outcomes. To organize this effort, we integrate extant research into a conceptual model that extends previous reviews and meta-analysis [4,7] by grouping social factors into organizational insiders and organizational outsiders. Therefore, this study contributes to the literature in three respects. First, we contribute to the job crafting literature by analyzing the relationship between different social-elements antecedents (e.g., leadership and coworkers) and job crafting. Using a meta-analytic approach, our study compares how different social factors relate to different forms of job crafting behaviors. In particular, we considered job crafting into two ways: promotion and prevention-focused job crafting; and the different forms of job crafting defined by Tims et al. [18] (e.g., seeking resources, seeking challenges and reducing demands). We provide meta-analytic evidence about how different social factors (i.e., different leadership styles and coworker factors) related to different forms of job crafting. Relatedly, we differentiated social factors into organizational insiders and organizational outsiders, which advances our knowledge about the antecedents of job crafting. Second, our study contributes to job crafting literature by underlying that job crafting plays an important mediating role in the relationship between social factors and work outcomes. That is, job crafting is an effective self-initiated strategy that may successfully transform favorable social factors into improved work performance and well-being. We extend the work of Lichtenthaler and Fischbach [5] and uncover the mediating role of promotion-focused job crafting in the interpersonal context. In doing so, we provide a finer-grained understanding of how social factors related to employee outcomes through job crafting. Finally, building on articles we reviewed, our study contribute to the job crafting literature by providing a detailed future research agenda to advance this field.

1. Theory and Hypothesis

1.1 Job crafting conceptualizations

Historically, job crafting was first introduced by Wrzesniewski and Dutton [1]. The authors took a role-based perspective and defined job crafting as employee self-initiated physical and cognitive changes in tangible work role boundaries and intangible work role perceptions. Three types of job crafting were included – task crafting (i.e., changing the tasks individuals perform at work), relational crafting (i.e., changing the social characteristics of the job), and cognitive crafting (i.e., changing the way individuals think about their jobs). The role-based job crafting approach posits that job crafting motives are rooted in employees' needs to gain control, a positive self-image, and social relatedness at work [19]. It can satisfy individual basic needs, contribute to increased meaningfulness at work, and gain related benefits of work meaningfulness [5].

Subsequently, Tims and Bakker [20] took a resource-based perspective on job crafting and defined job crafting as the self-initiated changes employees make to adjust their job resources and job demands. This conceptualization of job crafting is situated in the broader framework of the job demands-resources (JD-R) model [21]. Three types of job crafting were included– seeking resources (e.g., ask for feedback), seeking challenges (e.g., ask for more responsibilities), and reducing hindering demands (e.g., making work less mentally intense). Therefore, it is argued that JD-R job crafting might be more measurable and broader than the former one. JD-R job crafting may include more self-learning

behaviors [21]. Given the contradictory effects of reducing hindering demands (see [22,23]), Demerouti and Peeters [24] proposed that optimizing demands could be a more effective and beneficial strategy compared to simply reducing demands. Based on the JD-R model, resource-based job crafting motives are rooted in employees' need to align their levels of job resources and job demands with their own abilities and preferences [4,18]. Job crafting promotes a person-environment fit, work engagement, and reduces job strain and burnout [21].

Given the mixed effects of reducing hindering demands, recently, Lichtenthaler and Fischbach [5] took a regulatory focus perspective to refine and integrate previous two job crafting conceptualizations. Bindl et al. [25] also took the regulatory perspective to extend the framework of active changes at work. This perspective posits that individual behaviors tend to involve two self-regulatory processes – promotion-focused process and prevention-focused process. The former one emphasizes that people are motivated to approach positive end-states where their needs are satisfied, whereas the latter one underlines that people are motivated to avoid negative end-states where their needs are not satisfied [26]. Accordingly, two types of job crafting were proposed – promotion-focused job crafting and prevention-focused job crafting. Promotion-focused job crafting refers to the self-initiated changes employees make to expand and approach resources and challenges with a promotion focus; while prevention-focused job crafting refers to those self-initiated changes employees make to avoid and contract resources losses with a prevention focus [5]. Examples of promotion-focused job crafting are seeking resources, seeking challenges, expansion-oriented task, relational, and cognitive crafting. Prevention-focused job crafting includes reducing hindering demands, contraction-oriented task, relational, and cognitive crafting [23,27]. Similarly, Zhang and Parker [7] classified job crafting as approach crafting and avoidance crafting, which is in the same logic with the classification of Lichtenthaler and Fischbach [5].

We argue that the regulatory-focused job crafting conceptualization is able to capture a more comprehensive understanding of different motivational processes (e.g., promotion-focus and prevention-focus) behind job crafting behaviors. This conceptualization effectively integrates role- and resource-based job crafting [2], which can account for beneficial and detrimental effects of job crafting [5]. Therefore, we will use the forms of promotion-focused job crafting and prevention-focused job crafting to probe their antecedents and mediating roles.

[Insert Figure 1 about here]

1.2 Antecedents of job crafting: social factors

Prior literature on the investigation of job crafting has typically followed one of three main factors —individual difference (e.g., personality), job characteristics, or demographics (e.g., age, tenure, and work hours)—to understand the factors that associated with job crafting [4,7]. For example, research found that individual differences such as personality, self-efficacy, self-competence, and demographics of age and gender may influence job crafting [4,28,29]. Job characteristics of job autonomy, job enlargement, task significance, and task identity are positively related to employee job crafting [30,31].

Although the job crafting literature has well recognized the associations between individual factors and job characteristics factors and employee job crafting, a growing number of studies investigate the impact of social factors on job crafting [7]. However, no studies have systemically integrated the social factors of job crafting and how these social factors may influence employee job crafting. This is a significant omission. Social factors represent social connections that employees access in work domains (e.g., leaders, colleagues, customers, clients, and patients) and non-work domains (e.g., families and friends) [12]. Understanding how employees learn from their social connections may be as important as understanding who they are and what their jobs look like. The reason is that

individuals do not operate in isolation but are surrounded by colleagues and supervisors with whom they regularly interact and collaborate during the work time and by families and friends during the off-work time [13,14]. The interactive societal environment involves more opportunities and challenges that are vital to foster individual self-growth, career success, and need satisfaction [12,16,17]. In the current study, by integrating the socialization literature [32], we argue that two types of social factors will influence employee job crafting: (a) organizational insiders, including leaders [15], colleagues [14]. We emphasize the inherently "interpersonal" nature of organizational insiders as sources of social resources (e.g., information sources; c.f., [32,33]) and (b) organizational outsiders, including customers, patients, clients, and family members, may have a direct or indirect effect on employee's task or employee themselves. Below we explain how these social factors impact job crafting behaviors.

Leadership. Leader is one of the most important organizational-insider social factors that influence employee job crafting. Several resources-based theories can explain why social factors influence employee job crafting. For example, the JD-R theory posits that job resources lead to work engagement and trigger a motivational process [21]. According to the JD-R theory, leaders tend to have more valuable job resources that can offer to employees [34,35]. In particular, leaders promote individuals job crafting by providing personal resources to employees and designing resourceful jobs with urgency to craft [15]. These job resources include autonomy for jobs, empowerment to employees, additional opportunities, and valuable feedback [36,37]. Job resources enable employees to feel engaged and experience positive affect during the work, thereby promoting their motivation to modify tangible work role boundaries and intangible work role perceptions [4,7]. Some empirical studies found that employee-oriented leadership [38], transformational leadership [39], empowering leadership [36,40] and servant leadership [34,41] were positively related to employee promotion-focused job crafting. Those leaders provide autonomy to employees and encourage employees to pursue long-term goals, thereby promoting employees' motivation to craft their jobs. In addition, those leaders can influence job crafting via promoting employee's organizational identification and building a trusting, open, and supportive work climate [15].

However, not all leaders constantly provide resources to employees. Some leaders bring hindering demands to employees (e.g., destructive or abusive leadership) [42,43]. When employees perceive a limited scope for action, unilateral decisions about a job's tasks and goals, or an attitude from the leader that could be perceived as incorrect, they will most likely to adjust the job to decrease hindering job demands (a type of prevention-focused job crafting). Esteves and Lopes [44] found that directive leadership was positively related to prevention-focused job crafting. Tuan [45] found a negative association between authoritarian leadership and promotion-focused job crafting. Therefore, we argue that some favorable leaderships such as transformational, empowering, and servant leadership may contribute to employee promotion-focused job crafting, whereas some destructive leadership such as authoritarian and abusive leadership may lead to employee prevention-focused job crafting.

Colleagues. Colleagues are another important aspect of organizational-insider social factors. Tims and Parker [14] recognized that increasing employees may work in a group or team context. Therefore, coworkers play an increasingly critical role in employee job crafting [46]. According to the JD-R theory [21], colleagues provide employees with useful job resources as well. Colleagues are often taken as a form of social capitals which provides timely assistance, valuable feedback, and unique perspectives [12,47]. Also, Tims and Parker [14] demonstrated the beneficial role of coworkers' supportive behaviors on individual job crafting. Their main argument is that coworkers' support and feedback are seen as critical job resources. Employees are motivated to adjust their work procedures and tasks if they receive timely help and useful feedback towards current hurdles. Hence, employees may feel engaged and motivated when perceiving a higher level of social resources, and in turn, proactively adjust their jobs [5,27]. Prior studies showed that colleagues' helping behaviors and support were positively related to focal employee promotion-focused job crafting [24]. Similarly, excellent colleagues can function as role-

senders, who communicate expectations about tasks [48]. Individuals are willing to imitate good behaviors and learn new knowledge from others in order to promote their own behavior and performance [24]. Therefore, we argue that colleagues are another form of social resources in workplaces that may shape employee job crafting.

Organizational outsiders. Besides social factors such as leaders and colleagues in the work domain, employees' serve objects may also play an important role in employee job crafting. For instance, for service industry (e.g., education, tourism, and medical), customers, patients, and students are also important social factors. Loi et al. [49] found that customer participation positively related to cognitive and relational job crafting. The reason is that customer participation contributes contextual resources to service employees by means of taking up part of employees' job tasks and providing employees with new knowledge and information [50]. When employees perceive more participation from their customers, they are more likely to conduct task crafting such as altering the number and scope of their jobs or expanding to perform different tasks. Auh et al. [51] found that clients' expertise and advice add value to service delivery in the financial planning context by means of a joint decision-making process. It is expected that these positive processes facilitate how employees view their jobs, to develop personal resources such as becoming more innovative, and enable employees to gain a positive sense of self and meaningfulness [49].

In addition, social factors in the non-work domain may also influence employee job crafting. Research suggests that resources have spill-over effects across the work domain to non-work domain, and vice versa [52]. Westman [52] underlines that experiences, emotions and resources can be transferred across social and organizational contexts. For example, positive emotions and experiences outside work may be transferred to the work domain. Crossover of resources acts as a mechanism of resource exchange within resource caravans [53]. Such an exchange triggers the accumulation of resources in a positive way [54]. To achieve one's goals, individuals are motivated to self-expand one resource to increase other resources [55].

We thus argue that organizational outsiders such as family-based social factors may be an important antecedent of job crafting. Family-based social factors mainly include family support and family-work conflicts. Based on a resource-based view, families can provide general social resources such as family instrumental and emotional support [56]. It is argued that resources gained from the non-work domain can promote individual performance and affect in the work domain [57]. For example, resources such as emotional support from families lead individuals to feel loved, cared for, and valued [58], which can foster positive affect in the family to transfer to the individual's functioning at work. As a result, those employees who feel supported would keep motivated and engaged to enact their jobs and present proactivity in adjusting work role boundaries and perceptions. Research suggests that external support and a supportive environment are positively related to job crafting [56,59]. Therefore, we argue that family support may lead to promotion-focused job crafting.

However, families may also create family-work conflicts. These conflicts may include primary responsibility for children, elder care responsibilities, interpersonal conflict within the family unit, or unsupportive family members [60]. Research suggests that family-work conflicts lead to negative affect and resource loss, and these negative events could further impact individual affect and behaviors in the work domain [56,61,62]. As a result, employees may carry the negative affect and feel stressed during work time and perceive multiple demands of work and family roles. Hobfoll et al. [52] posit that individuals are motivated to protect their current resources and avoid resources loss in order to cope with threats and stress. Hence, employees may adopt an avoidance strategy (e.g., reducing job demands) to decrease exhaustion during the work. That is, family-work conflicts may trigger employees to reduce work demands to meet family demands. We argue that family-work conflicts may lead to prevention-focused job crafting.

Taking together, we argue that social factors such as leaders, colleagues, and families may significantly influence employees' motivation to enact and craft their jobs in order to balance their job resources and demands. Therefore, we hypothesize:

Hypothesis 1: Social factors (leadership, coworkers, and family factors) are positively related to employee job crafting. Specifically, favorable social factors (e.g., supportive leaders, colleagues, clients, and families) will be positively related to promotion-focused job crafting (H1a); whereas destructive social factors (e.g., abusive leaders and family-work conflicts) will be positively related to prevention-focused job crafting (H1b).

1.3 Social factors, job crafting, and work outcomes

In the previous section, we argued that social factors influence employee job crafting behaviors. However, another important question is whether job crafting can serve as a mediating tool linking social factors and work outcomes.

Job crafting literature indicates that promotion-focused job crafting is positively related to various work outcomes [4,7]. Based on the JD-R theory, promotion-focused job crafting is able to effectively mobilize resources, set challenging goals, and behave innovatively to facilitate work performance [20,63]; meanwhile, via promotion-focused job crafting, employees can effectively cope with threats and stress and thereby obtain and maintain a higher level of positive attitudes and occupational well-being [6,22]. Hence, promotion-focused job crafting can not only facilitate task completion (work performance) but also make employees feel good at work (well-being). Empirical studies have shown that promotion-focused job crafting is positively related to creativity [64], subjective well-being [65], positive affect [66], career competence [67], and career satisfaction and commitment [36].

Accordingly, we argue that promotion-focused job crafting would be a salient mediating mechanism linking social factors and beneficial work outcomes. In this study, we categorize work outcomes into two aspects: employee performance and well-being, which are consistent with the general model of proactive behavior by Bindl and Parker [29]. These two are important indicators to measure employee work outcomes because they emphasize what employees achieve and how employees feel during the work. Prior studies showed that employee performance usually comprises task performance, creative performance, and extra-role performance; whereas employee well-being usually comprises job satisfaction, turnover intention, and thriving [4,7]. Following our theoretical reasoning so far, it is expected that social factors are positively related to job crafting, and subsequently, job crafting (particularly, promotion-focused job crafting) is positively related to work performance and well-being.

For example, some favorable leaderships such as empowering, transformational, servant leadership can effectively promote employee work performance and well-being through promotion-focused job crafting. This may be because favorable leadership allows employees with more job resources such as job autonomy and support [31,34,35]. With increased job autonomy and support, employees are motivated to craft their work role boundaries and perceptions, and in turn, gain a higher level of task performance and positive affect at work [4,7]. Likewise, colleague and family support provides employees with additional social resources. These additional social resources are often seen as social capitals [12]. With increased social capitals, employees have more confidence and motivation to seek resources and avoid resources loss at work, which can influence their work performance and affect at work [14,68]. As a result, promotion-focused job crafting may serve as a significant mediating role. For example, some studies found that promotion-focused job crafting can successfully transmit the benefits of leaderships into improved innovative work behavior and citizenship behaviors towards coworkers and customers [34,69]. Besides, Guan and Frenkel [70] uncovered that job crafting effectively

mediated the positive HRM–performance relationship. Zito et al. [71] confirmed the positive association between job autonomy and job satisfaction through promotion-focused job crafting. Therefore, it is expected that promotion-focused job crafting is an effective mediating process by which social factors are successfully transformed into increased work performance and well-being.

On the contrary, those unfavorable social factors such as destructive leadership and family-work conflicts tend to result in prevention-focused job crafting. The reason is that employees likely perceive such social factors as hindering demands and thus possibly adopt an avoidance strategy (e.g., prevention-focused job crafting) at work [44]. Research further suggests that prevention-focused job crafting (e.g., reducing hindering demands) may have negative or nonsignificant effects on employee outcomes [23,27]. This is because hindering job demands seem to be given job characteristics which employees cannot change easily by themselves [23]. This means that prevention-focused job crafting such as reducing hindering demands is likely to be unsuccessful and does not produce favorable changes in tangible work role boundaries. Moreover, dealing with hindering job demands leads to work-withdrawal behaviors, which reduces work engagement [5]. As a result, employee job crafting with prevention focus may involve a less motivational process and can hardly transform these hindering social factors into improved work performance and well-being. Therefore, we expect that unfavorable social factors link to prevention-focused job crafting, and in turn, have detrimental effects on work outcomes. We hypothesize:

H2: Promotion-focused job crafting mediates the positive relationship between favorable social factors and (a) work performance/ (b) well-being.
H3: Prevention-focused job crafting mediates the negative relationship between unfavorable social factors and (a) work performance/ (b) well-being.

2. Methods

2.1 Literature search

To identify as many published and unpublished studies as possible, following the "best practices" in systematic reviews and meta-analyses [72–74], we conducted three sets of literature searches. First, online databases search. Relevant studies were identified through searching for eight databases: *Web of Science, PsycINFO, Google Scholar, JSTOR, ScienceDirect, EBSCO, Emerald, and ProQuest*. We used AND and OR Boolean search operators to define our search strings (for an example in Web of Science, see Appendix A). In particular, our keywords consist of two components: job crafting and social factors. For searching job crafting, we used keywords such as "job crafting" or "crafting"; for searching social factors, we used keywords such as "leadership", "leader", "manager", "colleague", "coworker", "work-family", or "work-home". All the searched literature was updated until June 2020. Second, to increase the accuracy and quality of literature search, we also conducted a manual search from 12 highly relevant journals (i.e., *Journal of Applied Psychology, Journal of Management, Journal of Organizational Behavior, The Leadership Quarterly, Journal of Occupational Health Psychology, European Journal of Work and Organizational Psychology, Personnel Psychology, Journal of Occupational and Organizational Psychology, Journal of Business Psychology, Human Relations, Academy of Management Journal, and Journal of Vocational Behavior*). Finally, we conducted backward search by recognizing 3 published meta-analytic articles concerning job crafting (i.e., [4,5,7] and checked their references list. In total, we identified 2059 potential articles for title and abstract screening after excluding duplicates.

2.2 Inclusion criteria and study coding

We included studies in the meta-analysis using the following criteria: First, studies had to be a quantitative study. Qualitative, review, or case studies were excluded. Second, studies had to include measures of both job crafting and social factors. Specifically, the measure of job crafting can be either

(a) an overall job crafting, or (b) four specific job crafting dimensions developed by Tims et al. [18] such as increasing social resources, increasing structural resources, increasing challenging demands, and decreasing hindering job demands, or (c) three specific job dimensions based on seminal work of Wrzesniewski and Dutton [1] such as task crafting, cognitive crafting, and relational crafting, or (d) two specific job dimensions based on the classification of Lichtenthaler and Fischbach [5] such as promotion/expansion-oriented job crafting and prevention/contraction-oriented job crafting. The measures of social factors can be either (a) different types of leadership such as transformational, empowering, servant, authentic, charismatic, and transactional leadership, or leadership related concepts such as leader-member exchange (LMX); (b) colleagues, coworkers such as colleagues' job crafting behaviors and coworkers' support, or (c) family factors such as work-family interference. Third, the correlations between job crafting (or specific dimensions of job crafting) and social factors had to be reported in the studies. Fourth, when a study used two or more independent samples (e.g., [75]), samples were coded separately. When the same sample was used in more than one article (e.g., [76,77], we made sure to include the same relationships only once. These inclusion criteria yielded in a final set of 51 studies representing 54 independent samples with 17,863 employees (see Appendix B, Figure 2 provides a flow chart of our searching process).

All 51 studies were coded by two authors independently and the coding was compared in cases of disagreement. Interrater agreement was 94% across the study variables, indicating substantial agreement. Disagreements about the inclusion of a study or specific coding were discussed until a consensus was achieved. For each study, we coded the sample size, the correlations between social factors and job crafting, the correlations between social factors and outcome variables, the correlations between job crafting and outcome variables. These data were further checked by another author to reduce potential coding error. Moreover, we coded additional information including study design, theories, employees' demographic backgrounds such as age, tenure, gender, nationality, and occupation, and main findings. Appendix A provides a table that lists all the included studies.

2.3 Data analysis strategy

Random-effects meta-analytic procedures [78] were conducted in R program by using the R 'metafor' package [79]. To provide accurate estimates, the weighted mean correlations and their variances were corrected for sampling error [78]. When a study reported effect sizes for multiple independent samples, all of the relevant correlations were included as separate effect sizes. As some studies reported correlations of specific job crafting (e.g., increase social resources, increase challenge demands, and increase job resources) and social factors, these data are nested in the same sample. When calculating the overall effect sizes between social factors and job crafting, we used the three-level meta-analysis to calculate the pooled effect sizes as researchers suggested it is a better way to address the dependency of effect sizes issue [80,81]. We used two indexes to assess between-study heterogeneity: Q-test and I2 [82]. A significant Q test value indicates that the studies are more heterogonous as one would normally expect. I2 index suggests the percentage of variation across studies due to heterogeneity [82]. Correlations were considered as statistically significant when the 95% confidence interval (also a measure of variability distribution of correlations across studies) did not include zero.

To examine the mediating effect, we conducted the meta-analytic structural equation modelling approach (MASEM) [79]. A two-stage structural equation modelling (TSSEM) approach was employed to test how social factors influence outcomes through job rafting [83]. And the R metaSEM package was used to perform our analyses [79,83]. In the first stage, we combined the relevant effect sizes into matrices to calculate a pooled correlation matrix; next, we estimated the mediation effect by fitting a structural equation model to the pooled meta-analytic correlation matrix. We requested a 95% confidence interval around the indirect effect and considered as statistically significant when it did not include zero.

3. Results

3.1 Social factors and job crafting

Hypothesis 1 states that social factors are positively related to job crafting. As mentioned earlier, due to dependency of effect sizes in our study (i.e., some studies reported more than one effect sizes of different job crafting behaviors), we used three-level meta-analysis to test the overall effect of social factors on job crafting. The results indicated that overall social factors are positively related to promotion-focused job crafting (k = 68, ϱ = 0.372). About 5.8% of the overall variance can be attributed to level 1 (i.e., sampling variance), 73.8% to level 2 (variance between effect sizes extracted from the same study), and as much as 20.4% to level 3 (variance between studies). And the overall three-level model compared to the reduced two-level model does indeed have a better fit, with the Akaike Information Criterion (AIC) and the Bayesian Information Criterion (BIC) being lower for this model (LRT = 45.56, p < .001). The difference is significant, suggesting we should include this level into our analysis. We also found leader-follower relational related variables (e.g., guanxi, LMX, and leader trust) are positively related to promotion-focused job crafting (k = 13, ϱ = 0.279, CI = [0.189, 0.370]).

[Insert Table 1 about here]

The three-level meta-analysis results showed that most of the variance of effect sizes are caused by the Level 2 variance (i.e., different types of job crafting behaviors), thus we investigated how specific social factors related to specific job crafting behaviors. Table 2 reports the relationships between social factors and job crafting when considering job crafting as increasing structural resources, increasing social resources, and increasing challenges demands. For this analysis, we only included one effect size from each sample. Meta-analyses results demonstrated that social factors were positively related to increasing structural resources (k = 6, ϱ = 0.178, CI = [0.059, 0.293]), increasing social resources (k = 10, ϱ = 0.332, CI = [0.246, 0.414]), and increasing challenge demands (k = 11, ϱ = 0.210, CI = [0.138, 0.277]).

Unexpectedly, we found insignificant effect of social factors on prevention-oriented job crafting (k = 9, ϱ = 0.022, CI = [-0.091, 0.134]). Similarly, the mean corrected associations between empowering leadership and prevention-focused job crafting was insignificant (k = 3, ϱ = .201, CI = [-0.007, 0.409]). Below, we report how specific social factor influences employee job crafting behaviors.

[Insert Table 2 about here]

3.1.1 Leadership and job crafting

We found that leadership was positively related to employee promotion-focused job crafting behavior (ϱ = 0.344, CI = [0.284, 404]). Specifically, leadership styles of empowering (k = 14, ϱ = 0.331), transformational (k = 10, ϱ = 0.314), charismatic (k = 3, ϱ = 0.160), servant (k = 3, ϱ = 0.841), and transactional (k = 3, ϱ = 0.236) are positively related to promotion-focused job crafting. When we consider how leaderships are related to specific job crafting behaviors. We found that empowering leadership and transformational leadership are two salient social factors. In particular, empowering leadership was positively related to increasing social resources (k = 4, ϱ = 0.387, CI = [0.182, 0.592]) and increasing challenge demands (k = 4, ϱ = 0.317, CI = [0.166, 0.467]), respectively. Transformational leadership was positively related to increasing social resources (k = 3, ϱ = 0.385, CI = [0.198, 0.573]), increasing structural resources (k = 3, ϱ = 0.266, CI = [0.080, 0.452]), and increasing challenges demands (k = 4, ϱ = 0.209, CI = [0.117, 0.301]).

In addition, some of our included studies tested the effect of team-level leadership on job crafting (which were not included in the meta-analysis to calculate the pooled effect size). For instance, team

level servant leadership (Luu et al., 2019; Tuan et al., 2020), charismatic (Luu et al., 2019) are positively related to job crafting.

Finally, we also found some destructive leadership styles have a negative effect on employee job crafting. For instance, abusive supervision (Luu et al., 2019), leader's need for structure (Solberg & Wong, 2016), and paternalistic leadership/ authoritarianism (Tuan, 2018) are negatively related to employee job crafting.

3.1.2 Coworkers and job crafting

Coworker emotional and instrumental social support are positively related to employee promotion-focused job crafting (k = 7, ϱ = 0.261, CI = [0.171, 0.351]). In addition, colleagues' job crafting also influences employee job crafting behaviors. For instance, Bakker et al. [84] showed a reciprocal relationship between dyad members' job crafting behaviors – each of the actor's job crafting behaviors was positively related to the partner's job crafting behaviors. Similarly, Demerouti and Peeters [24] found the transmission of both job crafting dimensions among colleagues. Similar cross-over effect was reported by Peeters, Arts, and Demerouti [68].

3.1.3 Family factors and job crafting

In our reviewed articles, only a few studies focused on the associations between family factors and job crafting. For instance, we found that work-family conflict encourages or discourages job crafting by moderating the relationship between tendencies toward workaholism and expansion and contraction-oriented job crafting [85]. Job crafting is positively related to work-family conflict [71], and work-to-family enrichment [37,49,86]. However, the latter three studies treated family factors as outcomes, thus did not focus on how family factors influence job crafting.

In summary, we found that positive social factors especially organizational insiders were positively related to promotion-focused job crafting. Thus, Hypothesis 1a was supported. Whereas the results between social factors and prevention-focused job crafting were insignificant, Hypothesis 1b was not supported.

3.2 Social factors and employee performance and well-being

To test the mediating effects of job crafting, we categorized our outcome variables as job performance and well-being. Table 3 showed the categorizations of work outcomes in which performance includes creativity, innovative work behavior, OCB, positive work behavior, and task performance; and well-being includes affective commitment, job satisfaction, organizational identification, and thriving.

[Insert Table 3 about here]

TSSEM was conducted to test the mediation effect. In the first stage, to calculate the pooled correlation matrix, we used 32 independent correlation matrix (N = 9,156). First, we tested a fixed-effects model, the model fit indexes showed that χ^2 (70) = 444.78, p < .01, CFI = 0.838, TLI = 0.831, and the RMSEA was 0.135, which was larger than 0.80, indicating bad fit. Therefore, in the second stage, we used a random-effects model to test our mediation hypothesis (Harrer, Cuijpers, Furukawa, & Ebert, 2019). The averaged correlation matrix based on the random-effects model was reported in Table 4. We found a medium-sized overall correlation between social factors and promotion-focused job crafting (r = 0.304, p < .01), and outcomes (performance and well-being) (r = 0.304, p < .001). Similarly, we found a positive association between promotion-focused job crafting and outcomes (r = 0.309, p < .001).

[Insert Table 4 about here]

In stage 2, we used the pooled correlation matrix to fit the hypothesized structural model. The results were reported in Table 5 shows that promotion-focused job crafting positively mediated the relationship between social factors and well-being (b = 0.046, CI = [0.072, 0.103]), and promotion-focused job crafting positively mediated the relationship between social factors and performance (b = 0.054, CI = [0.081, 0.116]). Hence, H2 was supported.

[Insert Table 5 about here]

However, due to the lack of data on the prevention-focused job crafting, we cannot test the mediating effect of prevention-focused job crafting. Therefore, Hypothesis 3 was not tested.

4. Discussion

This study aims to meta-analytically examine whether social factors related to employee job crafting, and how job crafting mediates the relationship between social factors and work outcomes (e.g., employee performance and well-being). Building on social capital theory, we categorized social factors as organizational insiders and outsiders. We found positive associations between social factors of organizational-insiders (e.g., constructive leadership and coworker support) and job crafting, whereas a nonsignificant relationship between social factors of organizational-outsider and job crafting (due to small sample sizes). Besides, leaderships are more important social factors than coworkers associated with employee job crafting. We further found that promotion-focused job crafting positively mediate the relationship between factors of organizational-insiders and work outcomes, whereas for prevention-focused job crafting we did not have enough studies to test our hypotheses. Our study suggests that social factors significantly shape employee job crafting behaviors and in particular promotion-focused job crafting can successfully transmit favorable social factors into improved work outcomes. Below, we explain our result of how specific social factors related to employee job crafting.

First, in this meta-analysis, we consider leadership as important social factors that associated with subordinates' job crafting behavior. Among them, we found that empowering leadership and transformational leadership were two salient ones. From a regulatory-focus perspective, empowering and transformational leaderships are positively related to promotion-focused job crafting. From a resource-based perspective, empowering and transformational leaderships are positively related to seeking resources and seeking challenges (two forms of job crafting). These findings imply that when employees perceive their leaders are transformational and empowering, employees may have more social resources to enact their jobs and adjust work role boundaries and perceptions. Our results are in line with previous studies that transformational and empowering leaders are taken as supportive role models and vital job resources that foster employees to craft their jobs [36,39,40,44]. Contrarily, although it was not included in the meta-analytic analysis, we recognized from our included articles that destructive leaderships are negatively related to employee job crafting such as abusive supervision [87] and paternalistic leadership/ authoritarianism [45]. In summary, our results demonstrate that supportive/favorable leaderships play an important role in driving employee (promotion-focused) job crafting, whereas destructive leaderships may have detrimental effects on employee (promotion-focused) job crafting.

Besides leadership, we found that coworkers' support also related to employee's job crafting and that coworkers' job crafting influenced employee job crafting as well. These findings imply that coworkers are another important source that related to employees' motivation to enact their jobs (although the pooled association with promotion job crafting was weaker than leadership). Hence, coworkers are also important social factors in terms of motivating and facilitating employee to adjust

their work role boundaries and perceptions. As employees work in an increasingly interactive work environment and even need to collaborate with other coworkers in multidisciplinary teams [14,68,84], our results show that it is important for employees to learn from their coworkers and craft their jobs accordingly.

Finally, we found that promotion-focused job crafting positively mediates the relationship between social factors of organizational-insiders (e.g., leadership) and work outcomes, whereas prevention-focused job crafting did not. This finding implies that when employees work with supportive leaders or colleagues, an effective way to transform these social capitals into improved work performance and well-being is job crafting with a promotion focus (e.g., seeking resources, seeking challenges, and expansion-oriented task, relational, and cognitive crafting). We highlight that promotion-focused job crafting is an important behavioral mechanism through which employees can successfully accumulate vital job resources from leaders and colleagues, and in turn, resulting in beneficial consequences of their work performance and well-being [5].

4.1 Theoretical implications

Our study contributes to the literature in three ways. First, we contribute to job crafting literature by integrating the social factors into the antecedents of job crafting. Although prior studies have recognized the individual factors (e.g., personality and personal resources) and job characteristics (e.g., autonomy and workload) that shape employee job crafting [4,7], our study advances this field by demonstrating how leadership, coworker, and organizational outsiders influence employee job crafting. This is important because the social elements of work play a critical role in shaping employees' experiences and behaviors [11]. The interpersonal interactions and relationships are actually embedded in and influenced by the jobs, roles, and tasks that employees perform and enact [11]. Using a meta-analysis, our study systematically integrates job crafting model from a social/interpersonal perspective and delineates the antecedents (as well as outcomes) of job crafting based on a framework of organizational insiders and organizational outsiders. Therefore, our study adds to job crafting literature by expanding the antecedents of job crafting model.

Second, our study contributes to job design literature by showing that promotion-focused job crafting mediating the relationship between social factors and work outcomes. That is, promotion-focused job crafting (e.g., seeking resources, seeking challenges, and expansion-oriented task, relational, and cognitive crafting) is an effective self-initiated strategy that can successfully transform favorable social factors into improved work performance and well-being. We extend the work of Lichtenthaler and Fischbach [5] and uncover the roles of promotion-focused job crafting in the interpersonal context. By incorporating social learning and resource-based perspectives, this study underlines that job crafting is taken as an important social learning process; as well as a resource accumulation/conservation process by which employees can input social resources and output higher levels of their work performance and psychological well-being.

Third, our study contributes to leadership literature by identifying job crafting as an important mediator. Prior leadership literature has uncovered certain important intermediate mechanisms of how leadership related to employee outcomes [88]. For example, critical mediators such as self-efficacy [89], trust in the leader [90], and identification with the leader [91] were positively linked the relationship between leadership and employee outcomes. However, relatively less is taken from a behavioral perspective to understand the leadership-employee outcomes relationship. By filling this gap, our study underscores the beneficial mediating role of employee job crafting in the relationship between leadership and employee outcomes. In this vein, we provide more nuanced insights on what specific actions and strategies employees can use to convert leaders' attitudes, behaviors, and vision into their own work achievements.

4.2 Practical implications

This study provides implications for management practice. First, our study indicates that supportive organizational insiders act as an important conduit for shaping employees' proactive behaviors. Therefore, organizations should attempt to create a supportive work environment in order to cultivate employee job crafting behaviors. For example, organizations should hire and train leaders with more empowering and transformational abilities [92,93]. Besides, organizations should encourage colleagues' helping, sharing, and mutual-supporting behaviors because these beneficial behaviors can be transmitted and learned among colleagues [68].

Second, our study suggests that promotion-focused job crafting serves as an effective mediator linking the relationship between organizational insiders and work outcomes. Therefore, organizations should facilitate such a bottom-up job redesign behavior. Managers should encourage employees to engage in promotion-focused job crafting [5]. For example, emerging studies demonstrate that job crafting training and interventions is an effective tool to enhance employee promotion-focused job crafting behaviors [94,95]. Hence, these job crafting based training programs could be introduced to increase employee performance and well-being. Specifically, managers could consider training employees how to seek resources (e.g., performance feedback, advice from coworkers, support from managers), which may help employees address their job demands [94] and have positive outcomes.

4.3 Limitations and Agenda for future research

In reviewing the literature on the antecedents of social factors of job crafting, we were impressed by how researchers have been taken to advance this field. But there are some important issues remain undressed. Next, we provide a detailed research agenda for future study on job crafting on theoretical and methodology parts.

First, the focus of our meta-analysis was on the bivariate associations between social factors and job crafting as well as a mediating effect of promotion-focused job crafting. However, more complex relationships should be considered in future investigations. For example, although we uncovered the positive relationships between social factors and work outcomes through promotion-focused job crafting, another critical question is when such relationships could be amplified or constrained. In particular, individual factors such as promotion focus [96], organization-based self-esteem [97], and organization identification [39] have been found as moderators between social factors and job crafting. Future research needs to examine other boundary conditions of social factors on job crafting. In addition, prior studies have tended to investigate the moderators of the direct relationships between job crafting and various work outcomes [7,59]. We call for future studies to investigate how potential moderators influence the indirect relationships between social factors and work outcomes through job crafting. By doing so, the literature can capture a more comprehensive understanding of the different roles and mechanisms of employee job crafting.

Second, our meta-analyses only found the role of organizational insiders (e.g., leaders and colleagues) in employee job crafting and their work outcomes. Besides, these studies mostly focused on favorable/supportive leadership styles, for instance, empowering leadership, LMX, transformational leadership, ambidextrous leadership, charismatic leadership, servant leadership, and transactional leadership. However, employees sometimes may have to experience unfavorable leaderships such as paternalistic leadership and abusive leadership [44,45]. When employees work with these destructive leaders, it is important to understand how employees can react and respond to these leaders' behaviors and proactively adapt their job boundaries. Therefore, future studies could investigate how and when unfavorable leaderships impact employee job crafting behaviors. By doing so, we can gain a more comprehensive understanding of whether job crafting a potent strategy when work environments become less favorable.

Besides examining the relationship between organizational-insiders and job crafting, future studies could pay more attention to the role of organizational-outsiders, for example, clients, customers, patients, family factors, and other off-work factors. The spill-over literature indicates that individuals' behaviors and emotions are likely to spill over to another domain and influence individuals' performance in another domain [57,68]. This literature also demonstrates that resources can be transferred within and across social and organizational contexts [52]. However, we only identified a small piece of studies examining the associations between job crafting and family factors (e.g., work-family conflicts and work-family enrichment) [24,68]. Unfortunately, those family factors were taken as the outcome of job crafting rather than the antecedent. This is a research gap that needs to be filled by future studies. We call for future studies to empirically examine whether and how the factors of organizational outsiders (e.g., clients, families and off-work factors) may shape employee job crafting behaviors during the work.

Third, we remind future studies to consider the cross-culture issues of employee job crafting. In our included studies, participants were from 17 different countries and areas, most of which were from western countries such as Germany, Netherlands, and United States. However, research suggests that individuals' perceptions and behaviors are very likely to be influenced by national culture and perform differently in different national settings [98,99]. For example, people in some cultures may accept a higher degree of unequally distributed power than do people in other cultures [100]. In a high power distance culture, the relationship between leaders and subordinates is one of dependence; whereas in a low power distance society, the relationship between leaders and subordinates is one of interdependence [101]. Therefore, in some cultures with high power distance, employees may have less autonomy or have less motivation to change their job boundaries. Unfortunately, in our reviewed articles, no one has addressed the cross-culture issues. Thus, future studies can look into how national cultural characteristics moderate the relationship between social factors (e.g., organizational outsiders and insiders we mentioned in this study) and employee job crafting behaviors.

Finally, we draw attention to methodological issues for future study. In our reviewed articles, the majority were cross-sectional (43%) or multi-wave designs (49%). 8% of studies used diaries design to capture the short-term dynamics of job crafting process within and between individuals in the work context. Nevertheless, no (laboratory or field) experimental studies have been conducted to investigate the causal effects of social factors on employee job crafting behaviors. Obviously, the cross-sectional, multi-wave, or diary design without dealing with the endogeneity bias issue, can only tell us the correlational relationships between these factors and job crafting behaviors, whereas no causal relationships were testified [102]. This is unfortunate, because the founded significant correlations could be caused by omitted variables or a situation in which social factors and job crafting could influence each other (i.e., endogeneity bias issue) [102]. Therefore, to address this issue and testify a causal effect of social factors on job crafting, we suggest that future studies can take three possible approaches: (a) using experimental designs (e.g., field-experiment or lab-experiment) to investigate how social factors influence employee job crafting; (b) using panel designs to investigate the potential reciprocal causal effects; (c) using instrumental regression model to reduce the endogeneity bias in survey designs (for technical issues, see [102–104]). In Table 6, we provide outlines for future research direction.

[Insert Table 6 about here]

5. Conclusions

This study conducted a comprehensive meta-analysis of the relationships between social factors, job crafting, and work outcomes and integrated a general model of employee job crafting from a social/interpersonal perspective. We found that factors of organizational insiders were positively

related to promotion-focused job crafting and promotion-focused job crafting plays a mediating role in the relationship between organizational insiders and work outcomes. This study contributes to job crafting literature by stressing the importance of the social factors in cultivating employee job crafting and the role that promotion-focused job crafting plays in transforming socially valuable resources into improved work outcomes. We suggest that it is important for organizations and management practitioners to be aware of the social factors of job crafting and to facilitate employee proactive behaviors in the form of promotion-focused job crafting.

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