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the british
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Job and off-job crafting profiles: Time-lagged relationships with job, home and personal resources and well-being outcomes

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Abstract

Crafting research has often focused solely on the work domain or examined work and non-work life domains separately, using a variable-centered approach. Little is known about the interactions of crafting processes in the work and non-work domain. In this time-lagged study, we examined (1) the relationship between job and off-job crafting behaviours using a person-centered approach to identify crafting profiles, (2) whether job, home and personal resources differentially predicted these profiles and (3) whether these profiles differed in relation to outcomes, that is work engagement and mental well-being. We conducted a three-wave, time-lagged survey with 3-month intervals among 2125 employees. The results revealed three profiles of active (18.0%), average (48.2%) and least active (33.9%) crafters. Analyses of predictors showed that active crafters had higher levels of home developmental possibilities and self-efficacy than average and least active crafters, likewise for average crafters compared with least active crafters. Furthermore, active crafters had higher levels of social support at home than least active crafters. Regarding well-being outcomes, active crafters experienced significantly higher mental well-being than average and least active crafters and higher work engagement than least active crafters. Interventions to enhance employee's resources could stimulate crafting behaviours, ultimately improving well-being.

KEYWORDS

job crafting, latent profile analysis, leisure crafting, mental well-being, off-job crafting, work engagement

INTRODUCTION

In today's rapidly evolving workplaces, characterized by an increase in remote work and rapid digitalization and automation, employees can utilize proactive behaviours such as crafting to successfully navigate and thrive, thereby substantially enhancing their well-being (e.g., Rudolph et al., 2017; Slemp & Vella-Brodrick, 2014; Tims et al., 2021). Employees may craft inside and outside the workplace, proactively adapting specific characteristics in their work and non-work lives to match their abilities, preferences and needs (de Bloom et al., 2020; Demerouti et al., 2020; Tims et al., 2012). Yet, the work and non-work life domains are becoming ever more interconnected, as indicated by activities in the non-work domain shaping experiences in the work domain and vice versa (e.g., Bronfenbrenner, 2000; Demerouti & Bakker, 2023; Hecht & Boies, 2009). This underscores the need to understand the simultaneous occurrence of crafting behaviours across domains and the factors motivating them. Empirical evidence indicated that contextual and socio-environmental factors play an important role in influencing crafting behaviours (see Parker et al., 2010; Rudolph et al., 2017), particularly in a changing work environment (Petrou et al., 2012). As factors such as job and personal resources initiate a motivational process for enhancing positive work and health outcomes and functioning (e.g., Bakker & Demerouti, 2017), it is crucial to foster a holistic understanding of how resources at work and outside work can be considered simultaneously.

Although researchers have focused extensively on job crafting over the last two decades (see Rudolph et al., 2017; Tims et al., 2021), we still have a limited understanding of crafting processes in the off-job domain (de Bloom et al., 2020; for notable exceptions, see Demerouti et al., 2020; Petrou & Bakker, 2016). Few researchers have studied crafting in the work and non-work domains simultaneously (for exceptions, e.g., Demerouti et al., 2020; Petrou et al., 2017; Tušl et al., 2021). Additionally, earlier crafting research has taken a variable-centered approach, often treating crafting strategies in both domains as dichotomous independent factors applied uniformly across the studied population (e.g., Demerouti et al., 2020; Tims et al., 2021). This approach gives the same weight to each type of crafting strategy, overlooking how employees with diverse needs, preferences and motivations might concurrently use various crafting strategies to differing extents (see Mäkikangas, 2018). To consider these heterogenous effects, a person-centered approach may be utilized to identify subgroups of individuals who may use different crafting strategies within the job and off-job domains.

In our present study, we used a person-centered approach (i.e., latent profile analysis, LPA; Lubke & Muthén, 2005) to determine how employees within distinct subgroups (profiles) use diverse combinations of job and off-job crafting behaviours. We assess job crafting and off-job crafting using two distinct models, recognizing the more narrowly defined and homogenous nature of the work domain compared with the multifaceted and diverse non-work domain. Specifically, the non-work domain includes a wide variety of non-work role identities and leisure activities (see Hall et al., 2013; Torkildsen, 2012), and flexible, autonomous non-work activities (e.g., Petrou et al., 2017; Petrou & Bakker, 2016). Consequently, job crafting was assessed using the Job Demands-Resources model (JD-R; Tims et al., 2012), which clearly identified the specific job characteristics employees may proactively change, whereas off-job crafting was assessed using the needs-based model of crafting, which captures the DRAMMA psychological needs (detachment, relaxation, autonomy, mastery, meaning, affiliation; de Bloom et al., 2020) as broader goals of crafting. We apply existing work-home theories of spillover, compensation and conflict mechanisms (Edwards & Rothbard, 2000) to elucidate how crafting efforts might interact across life domains. Additionally, we extend the model of proactive motivation (Parker et al., 2010) that suggests distal individual and contextual factors of job crafting behaviours, to the off-job crafting domain. This allows us to examine whether and how job, home and personal resources may successively relate differentially to crafting profile memberships, as well as whether profiles relate differently to subsequent work engagement (i.e., active, fulfilling and positive work-related disposition consisting of vigour, dedication and absorption; Schaufeli & Bakker, 2004) and mental well-being (i.e., positive mental health in areas of psychological functioning and eudemonic well-being; Stewart-Brown et al., 2009) over time.

Our research makes four contributions to the existing literature. First, the present study contributes to the insights of close interrelations of work and life domains, particularly the emerging body of empirical research on crafting across life domains (de Bloom et al., 2020). In doing so, our study builds on the principles of the JD-R model (Tims et al., 2012) and the needs-based model of crafting (de Bloom et al., 2020) to identify configurations within individuals based on the respective crafting strategies they may use across life domains. Second, we aim to broaden the scope of personal and socio-environmental contextual factors in the crafting literature across life domains, as certain workplace factors (i.e., developmental possibilities at work; see also Tims et al., 2021; Zhang & Parker, 2019) and non-work factors (e.g., social support and developmental possibilities at home; see Demerouti et al., 2020; Petrou et al., 2017) have been largely neglected in the crafting literature so far. Finally, we aim to expand knowledge on crafting profiles that are beneficial for subsequent mental well-being and work engagement. This is important to provide a comprehensive view of employee engagement in both work and non-work domains, given the significant role of employee psychological well-being in fostering high engagement (Robertson & Cooper, 2010). In doing so, we build on the motivational process of resources (see Bakker et al., 2023).

Taken together, we aim to identify unique crafting strategies among subgroups of employees and their relationships with resources as antecedents and well-being as outcomes. Our findings therefore offer a holistic understanding of crafting across life domains and identify which types of resources could be targeted in interventions for a more adaptive, resilient and engaged workforce.

THEORETICAL BACKGROUND

The following subsections describe the theoretical basis of our study. First, we introduce the specific types of resources as antecedents of crafting which we examined. Next, we present the respective theoretical frameworks of job and off-job crafting.

Job, home and personal resources

Job resources are physical, social or organizational work characteristics which contribute to work goals attainment, job demands reduction and personal development (see Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004). Home resources are home-related assets enabling individuals to cope with demanding aspects at home (see Lee et al., 2020). Personal resources are positive aspects of the self, associated with resilience, including positive beliefs about one's ability to successfully control and influence the environment (Hobfoll et al., 2003). In our study, we focused on several resources proven in earlier studies to be relevant for crafting (see Rudolph et al., 2017; Tims et al., 2014). Notably, job resources (i.e., autonomy, social support from colleagues and supervisor, developmental possibilities at work) and home resources (i.e., home autonomy, social support from partner and family, home developmental possibilities), both of which are external contextual resources (Hobfoll, 2002), as well as personal resources (i.e., self-efficacy; ten Brummelhuis & Bakker, 2012), which are internal resources (Hobfoll, 2002). Distinguishing between contextual and personal resources enhances our understanding of how employees use the resources found within themselves and in their environment to attain goals or engage in certain behaviours such as crafting (Hobfoll, 2002; ten Brummelhuis & Bakker, 2012).

Job crafting and needs-based off-job crafting

Differences in domain characteristics suggest that studying job and off-job crafting simultaneously requires distinct theoretical models. First, non-work role identities are more diverse and may have a specific set of responsibilities for every role (e.g., parent, spouse, volunteer) compared with the work

role identity, which usually consists of a primary job role with clearly defined goals (see Hall et al., 2013). Second, individuals have more freedom and autonomy in choosing from multifaceted and diversified non-work activities compared with the more standardized, specialized and goal-oriented tasks and responsibilities in the work domain (see Berg et al., 2010; Torkildsen, 2012). This flexibility in non-work activities enables unfulfilled needs at work to be fulfilled during leisure time (Petrou et al., 2017; Petrou & Bakker, 2016). Consequently, crafting in the work domain involves proactive behaviours addressing changes in the specific work characteristics of job demands and resources (JD-R model; Bakker & Demerouti, 2007). Crafting in the non-work domain may entail individuals proactively making changes to a broader range of non-work life activities or characteristics to meet specific psychological needs (i.e., needs-based off-job crafting; Kujanpää et al., 2022).

Job crafting, according to the JD-R model (Bakker & Demerouti, 2007), refers to employees' proactive behaviour to change their job demands and resources according to their personal abilities, preferences and needs (Tims et al., 2012). Job demands refers to all job aspects that require persistent physical, mental and emotional effort or expertise (Bakker & Demerouti, 2007). According to Tims et al. (2012), employees balance their job demands and resources using four job crafting strategies: (1) increasing structural job resources (i.e., autonomy, resources variety, opportunities for self-development), (2) increasing social job resources (i.e., social support, approach supervisor for guidance), (3) increasing challenging job demands (i.e., new stimulating tasks or roles with the goal of development), (4) decreasing hindering job demands (i.e., physical, emotional or mental aspects requiring constant effort or skills).

Besides job crafting, scholars have shown empirically that employees also craft outside work (e.g., home and leisure crafting; Demerouti et al., 2020; Petrou & Bakker, 2016). Since the psychological processes underlying crafting behaviours are relatively more consistent across individuals, in this study, we utilized the recently developed, extensive framework of needs-based off-job crafting (de Bloom et al., 2020; Kujanpää et al., 2022), which captures the underlying psychological mechanisms of DRAMMA needs activated during leisure activities in enhancing subjective well-being (Newman et al., 2014). This framework was derived from various conceptual mechanisms linking leisure experiences with subjective well-being (e.g., Csikszentmihalyi, 1990; Ryan & Deci, 2000; Sonnentag & Fritz, 2007). Needs-based off-job crafting refers to a goal-directed process in which individuals proactively change their non-work characteristics to satisfy the corresponding dimensions of their DRAMMA psychological needs (de Bloom et al., 2020). Detachment refers to physical abstinence and mental disengagement from work-related activities (Sonnentag & Fritz, 2007). Relaxation refers to a state of increased positive affect and low activation (Sonnentag & Fritz, 2007). Mastery refers to the effort invested to overcome challenging experiences and seek out learning opportunities to hone skills and knowledge (Newman et al., 2014; Ryan & Deci, 2000). Autonomy refers to the capacity and willingness to select a course of action from several alternatives (Deci & Ryan, 2000). Affiliation refers to a feeling of connectedness and affection with others (Deci & Ryan, 2000). This framework emphasizes the pursuit of meaning and affiliation as key dimensions of psychological needs that promote well-being (Sonnentag et al., 2022).

HYPOTHESES

Job and off-job crafting profiles

Although a person-centered approach is exploratory such that the number or shape of the profiles is not known a priori, we predict that there exist at least four types of crafting profiles. For quantitatively different profiles, in which profiles differ in absolute mean levels of crafting, we predict simultaneously above average versus below average job and off-job crafting levels. For job crafting, Mäkikangas (2018) identified two subgroups of above average versus below average crafters; the former used all job crafting strategies simultaneously, while the latter only used decreasing hindering job demands but not the other strategies. These findings indicated that decreasing hindering job demands have different motivating aspects across subgroups of employees, calling for studying the use of decreasing hindering

job demands with other types of crafting strategies jointly using a person-centered approach (see also Hu et al., 2020; Mäkikangas & Schaufeli, 2021). Building on this reasoning, we studied job and off-job crafting jointly due to the interconnectedness of the work and home domains. We draw on the *spillover mechanism* describing inter-role experiences and behaviours occurring in both the work and home domains (Edwards & Rothbard, 2000). Specifically, de Bloom et al. (2020) suggested that crafting processes in one domain spill over into another, that is high (low) crafting efforts in the job domain would be related to high (low) crafting efforts in the off-job domain and conversely from the off-job to the job domain. Supporting this view, Demerouti et al. (2020) demonstrated that job crafting positively predicted home crafting. Additionally, Haun et al. (2022) demonstrated reciprocal relationships between job and home crafting.

For qualitatively different profiles, where profiles differ in relative mean levels of crafting that is reflected in the shape of the profiles, we expect two compensatory crafting profiles, in which employees who use relatively high levels of job crafting will potentially use relatively low levels of off-job crafting and vice versa. According to the *compensation hypothesis* in work-home research (e.g., Edwards & Rothbard, 2000; Staines, 1980), employees may have limited opportunity for crafting in one domain compared with another, leading to unmet needs, which may be compensated by being motivated to craft for these unmet needs in another life domain (see also de Bloom et al., 2020). Moreover, whether employees invest the effort to craft in one or even two life domains also depends on the availability of employees' limited resources, such as energy, that might be depleted when investing in effort in job crafting (Baumeister et al., 1994). Crafting in one domain could reduce resources for crafting in another domain, leading to the reduced likelihood of utilizing crafting efforts in the other domain (de Bloom et al., 2020), according to the *conflict mechanism* across work and home domains (Edwards & Rothbard, 2000). Following these lines of argumentation, we expect that limited resources and opportunities to craft in one life domain may motivate employees to compensate with enhanced crafting in another domain (de Bloom et al., 2020; Petrou & Bakker, 2016).

Although spillover and compensation mechanisms may both occur within individuals, typically one of these two mechanisms tends to predominate (Champoux, 1978). This suggests that individuals may have a preference for either crafting in both domains or for crafting in only one domain. In line with this, Near et al. (1987) identified two distinctive compensatory profiles and two distinctive spillover profiles of job and life satisfaction, highlighting the interconnectedness of work and non-work domains in contributing to overall well-being. In sum, we hypothesized:

Hypothesis 1. At least four job and off-job crafting profiles will be identified. The first profile characterized by least active job and off-job crafter. The second profile characterized by active job and off-job crafters. The third and fourth profiles will be characterized by a high level of crafting in one life domain but a relatively low level in the other crafting domain (compensatory crafters).

Resources and crafting profile membership

The link between job and home domains

While home resources have received little attention throughout crafting and engagement research (Lee et al., 2020; Tims et al., 2021), empirical evidence supported the benefits of resources transferring from home to work domain. For instance, resources provided by home, including social support and opportunities for self-development, help to enhance individuals' well-being and performance across life domains (e.g., Greenhaus & Powell, 2006), including improving work engagement and performance. Supporting this idea, de Bloom et al. (2020) posited that job and off-job domains can be viewed as extensions of each other, such that there is a spillover of crafting motives and efforts across all domains (see also Edwards & Rothbard, 2000). For example, employees who are better able to accumulate home

resources are more likely to use similarly high crafting efforts across all domains to gain home resources. Therefore, we expect that the availability of resources in one domain will engender crafting behaviours in another domain due to spillover effects.

While the availability of resources may influence the interconnectedness of crafting behaviours across life domains, the type of resources (e.g., work vs. family support) is also pivotal, as these may vary in strength and in their direct effects on domain-specific outcomes (e.g., Amstad et al., 2011, see French et al., 2018). Specifically, the matching hypothesis (Amstad et al., 2011) states that affective and behavioural reactions are usually stronger in the life domain corresponding to the source. This suggests that certain job resources predict job crafting more strongly than off-job crafting, while certain home resources have a stronger effect on off-job crafting than on job crafting. In contrast, personal resources, not being domain specific are assumed to be related to both job and off-job crafting in a similar strength (see Amstad et al., 2011).

The role of job resources

According to the model of proactive motivation (Parker et al., 2010), distal contextual factors such as job autonomy and social support at work play a crucial role in generating and maintaining proactive behaviours (see also Demerouti et al., 2020). Additionally, we propose that individuals with developmental possibilities at work are better equipped for pursuing proactive behaviours. As suggested by the model of proactive motivation (Parker et al., 2010), these individuals who behave proactively to challenge themselves for development will experience flow, ultimately satisfying their psychological needs (see also Slemp & Vella-Brodrick, 2014). Building on these principles (Parker et al., 2010), we therefore predict that employees with high levels of job resources (i.e., autonomy, social support, developmental possibilities) are more likely to belong to active crafting profiles than are those with lower levels of resources.

Job resources (i.e., job autonomy, social support from colleagues and supervisor, job developmental possibilities) have consistently demonstrated a positive influence on both job crafting (see Rudolph et al., 2017; Tims et al., 2021) and crafting in the off-job domain (e.g., leisure crafting; Petrou & Bakker, 2016) in variable-centered research. For example, high job autonomy should signal to employees that they have opportunities to reflect about their jobs and the tasks at work, as well as the chances to make changes (Wrzesniewski & Dutton, 2001). Furthermore, employees with high job autonomy are better able to manage their job demands by pursuing specific leisure activities for skills development (Karasek, 1979). This aligns with research findings indicating that job autonomy positively predicted crafting for leisure activities aimed at needs satisfaction (Zhao et al., 2020).

Regarding job social support, higher levels of social support from supervisor and colleagues enhance intrinsic motivation and lead to using more proactive strategies (e.g., job crafting) to manage demanding work environments (e.g., Greenglass & Fiksenbaum, 2009). Regarding job developmental possibilities, we expect that the availability of developmental possibilities at work and home would signal to employees whether they should seek or create such opportunities to align with their desired career and self-developmental needs. Modern working life requires employees to enhance their employability by personal development, which may prompt individuals to actively engage and adapt to changes in their work situation according to their own desired career goals (e.g., Fugate et al., 2004). Perceived discrepancies between needs for personal development and desired career goals may stimulate crafting efforts across several life domains to satisfy these needs and attain these goals (de Bloom et al., 2020).

The role of personal resources

According to the 'can do' pathway in the model of proactive motivation (Parker et al., 2010), the availability of personal resources including higher self-efficacy (i.e., beliefs about the ability to perform a specific task or role successfully in a given situation) enhances individuals' motivation to set proactive

goals and take on challenges or psychological risks of behaving proactively at work. This in turn facilitates employees' proactive behaviours in shaping their job characteristics. In the same vein, self-efficacy positively predicted long-term (see Rudolph et al., 2017) and daily (Tims et al., 2014) job crafting. In the non-work domain, self-efficacy is an important predictor of leisure activities for self-development, meaningful interpersonal relations, relaxation and psychological detachment (e.g., Raymore, 2002; Sonnentag & Fritz, 2007). By extension, we propose that employees with greater self-efficacy engage in higher levels of crafting behaviours for needs satisfaction during work and during their off-job time.

Taken together, building on the principles of the model of proactive motivation (Parker et al., 2010), including the role of distal contextual factors and the 'can do' pathway, as well as the aforementioned spillover effects of resource availability on crafting behaviours across life domains (de Bloom et al., 2020; Edwards & Rothbard, 2000), we expect that employees with high levels of job, home and personal resources are more likely to belong to high crafting profiles than those with lower levels of resources. According to the matching hypothesis (Amstad et al., 2011), we also expect that employees who belong to the compensatory crafters' profile more likely have high levels of matching resources in the respective crafting domains. Specifically, high levels of job (home) resources are more strongly associated with the compensatory crafter profiles characterized by higher (lower) level of job crafting and lower (higher) level of off-job crafting. Moreover, we expect that high levels of personal resources are similarly associated with both types of compensatory crafter profiles.

Hence, we hypothesized that:

> **Hypothesis 2.** High levels of (a) job resources (i.e., job autonomy, social support from colleagues and supervisor, job developmental possibilities), (b) home resources (i.e., home autonomy, social support from partner and family, home developmental possibilities) and (c) personal resources (i.e., self-efficacy) are associated with increased likelihood of active crafters profile membership relative to other crafter profiles.

Crafting profiles and well-being

De Bloom et al. (2020) also posited that crafting efforts and outcomes are also similar across all domains, such that positive and negative experiences in one domain spill over into another. We therefore predict that active crafters would exhibit the highest levels of work engagement and mental well-being, followed by compensatory crafters because they primarily craft in one domain, and lastly by least active crafters. For work engagement, the JD-R model proposes that job resources are most predictive of work engagement when job demands are high (Tims et al., 2013). Therefore, job crafting enhances work engagement by changing job demands and resources to match individuals' abilities and needs, thus improving person-job fit (see Rudolph et al., 2017). Supporting this view, person-centered research indicated that relatively high mean levels of all JD-R job crafting strategies predicted increased work engagement (e.g., Mäkikangas, 2018; Mäkikangas & Schaufeli, 2021). Nevertheless, variable-centered studies yield inconsistent evidence of the association between the use of JD-R job crafting strategies jointly and work engagement (see Mäkikangas, 2018; Rudolph et al., 2017). While the associations between off-job crafting on work engagement has received much less attention, insights from recovery experiences research indicates that psychological detachment, relaxation and mastery experiences during leisure time energize individuals (e.g., de Bloom et al., 2015). Supporting this, Kujanpää et al. (2022) found a positive link between off-job crafting for DRAMMA needs satisfaction and work engagement.

For mental well-being, employees who job craft are more likely to perceive their job as an occupational calling and derive intrinsic enjoyment and meaning from it (Wrzesniewski et al., 1997), thereby contributing to enhanced psychological and eudemonic well-being (see Slemp & Vella-Brodrick, 2014). Variable-centered findings have suggested that the effect of job crafting on mental well-being varies; some studies have shown a positive relationship (Garg et al., 2021; Zhang et al., 2018), while others found no significant difference (Brauchli et al., 2022). Nevertheless, in the off-job domain, variable-centered

research indicated that leisure crafting for detachment, mastery and control experiences enhances recovery from work, thus reducing daily emotional exhaustion (Abdel Hadi et al., 2021) and improve physical and mental well-being (Brauchli et al., 2022; Maslach & Leiter, 2008). In sum, supporting findings from earlier person- and variable-centered research that levels of crafting in both domains increase with well-being outcomes, we hypothesized:

> **Hypothesis 3a.** Active crafters experience higher work engagement than those in the other crafter profiles. Compensatory crafters experience higher work engagement than least active crafters.

> **Hypothesis 3b.** Active crafters experience better mental well-being than the other crafter profiles. Compensatory crafters experience better mental well-being than least active crafters.

METHOD

Participants and procedure

The present research is a time-lagged study conducted in three waves with 3-month intervals in December 2018 (T1), in March 2019 (T2), in June 2019 (T3) with German-speaking employees from Germany, Austria and Switzerland. We used a time-lagged design by separating the measurement of job and off-job crafting behaviours from job, home and personal resources, as well as from work engagement and mental well-being, in order to reduce the risks of reverse causality and common method bias (Podsakoff et al., 2012). The three-month time interval was based on earlier longitudinal findings. While positive effects were only found for crafting job resources within 1 month and not for job demands (see Harju & Tims, 2020), it is suggested that job demands may be difficult to change in the short term (e.g., 1 month) and may require more time than a two-month study period (Hakanen et al., 2006; Tims et al., 2013). Consistent with this, longitudinal studies have identified 3-month time lags as optimal for establishing a positive relationship between crafting and work engagement (e.g., Zeijen et al., 2018). Corroborating these views, the *Integrative Needs Model of Crafting* posits that needs-based crafting behaviours and cognition only change in the middle or long term (de Bloom et al., 2020).

The survey data were collected through a commercial panel data service (i.e., Bilendi & respondi, formerly Respondi AG), which is an ISO 20252 certified online sample provider that ensures high quality in providing accurate, reliable and traceable data through continuous quality control. The eligible participation criteria were participants who worked at least 20 hours per week and were between 18 and 65 years of age. The original sample consists of 3232 employees at T1. At T2 and T3, questionnaires were sent to this original sample of employees, and 2285 participants at T2 and 1453 participants at T3 completed the survey. To ensure high data quality and consistency across all waves, data screening for inattentiveness or carelessness and lack of effort was conducted. Participants (N_{T1} = 1115, N_{T2} = 809, N_{T3} = 319) displaying characteristics of speeding, straightlining and failed attention checks were excluded using careless responding analyses procedures. Our final sample corresponds to the participants who responded to at least one wave across the three survey waves (N = 2125) to avoid bias from listwise deletion. Data from all three time points are available for 1104 participants. 394 and 627 participants responded to two and one survey(s), respectively. At T1, 50.0% identified themselves as women and the average age was 43.64 (SD = 11.13). Most participants resided in Germany (66.2%), completed vocational training (42.7%), were childless (66.5%), worked on average 40–49 hours per week, had on average worked 10.71 years (SD = 9.67 years) for their current employers and were not in a managerial position (69.4%). Participants worked in various fields, including in health care and social work (13.6%), public administration and services (10.6%) and trading (10.7%).

Measures

All measures validated in languages other than German (i.e., English) were translated into German and back translated to ensure accuracy. Sample items in each sub-category of the measures are reported in the Data S1 (https://doi.org/10.6084/m9.figshare.21286092).

Job crafting

Job crafting was measured using an 18-item scale adapted from the job crafting scale by Tims et al. (2012) and Petrou et al. (2012) using a 5-point scale (1 = *never* to 5 = *very often*), which comprises four dimensions increasing structural job resources (five items; $\alpha = .78$), social job resources (five items; $\alpha = .75$), seeking challenging demands (three items; $\alpha = .82$), decreasing hindering job demands (four items; $\alpha = .67$). A sample item is, 'I try to learn new things at work'. Confirmatory factor analysis (CFA) indicated that the estimated four-factor model had an acceptable fit with the data (T2: $\chi^2 = 1052.49$, df = 129, $p < .001$, CFI = .89, TLI = .87, RMSEA = .07, SRMR = .07). The overall reliability of job crafting was .83.

Off-job crafting

Off-job crafting was measured using the new 18-item off-job crafting scale (Kujanpää et al., 2022) using a 5-point scale (1 = *never* to 5 = *very often*), which comprised six DRAMMA dimensions with three items each: Detachment ($\alpha = .86$), Relaxation ($\alpha = .82$), Autonomy ($\alpha = .724$), Mastery ($\alpha = .79$), Meaning ($\alpha = .75$), Affiliation ($\alpha = .88$). A sample item is, 'Over the past month, I've made sure to experience meaning in my life during off-job time'. CFA indicated that the estimated six factor model fitted well with the data (T2: $\chi^2 = 383.05$, df = 120, $p < .001$, CFI = .98, TLI = .97, RMSEA = .04, SRMR = .03). The overall reliability of off-job crafting was .91.

Job resources

Developmental possibilities at work (three items; $\alpha = .84$; Udris & Rimann, 1999), control (six items; $\alpha = .84$; Cousins et al., 2004), colleagues' support (four items; $\alpha = .83$; Cousins et al., 2004) and supervisor's support (five items; $\alpha = .90$; Cousins et al., 2004), were measured as job resources using a five-point scale (1 = *strongly disagree* to 5 = *strongly agree*). A sample item is, 'I can decide when to take a break'.

Home resources

Home resources (Demerouti et al., 2010) consisted of three dimensions of home autonomy (four items; $\alpha = .86$), developmental possibilities (three items; $\alpha = .77$) and social support (four items; $\alpha = .84$), using a 5-point scale (1 = *never* to 5 = *always*). These home resources conceptually match the job resources dimensions used in the present study. A sample item is, 'I have control over how I use my free time'.

Personal resources

Personal resources were measured by self-efficacy, using the 10-item generalized self-efficacy scale developed by Schwarzer and Jerusalem (1995) rated on a 4-point scale (1 = *not at all true* to 4 = *exactly true*) with no neutral midpoint ($\alpha = .89$). A sample item included, 'I can always manage to solve difficult problems if I try hard enough'.

Work engagement

Work engagement was measured with the 9-item Utrecht Work Engagement Scale (UWES; Schaufeli et al., 2006) using a 7-point scale (0 = *never* to 6 = *always*). The UWES (α = .97) consists of three dimensions with three items each: Vigour (α = .91), Dedication (α = .92), and Absorption (α = .90). A sample item is, 'At my work, I feel bursting with energy'.

Mental well-being

Mental well-being was measured with the 7-item unidimensional self-reported Short Warwick-Edinburgh Mental Well-being scale (SWEMWBS; Stewart-Brown et al., 2009) using a 5-point Likert scale (1 = *none of the time* to 5 = *all of the time*; α = .89). A sample item is 'I've been feeling optimistic about the future'.

Demographics[1]

Background variables are age, gender, educational background, children, job tenure and organizational rank at T1 since they were linked to resources antecedents, crafting and well-being outcomes that were included in prior studies (e.g., Rudolph et al., 2017; Sakuraya et al., 2017; Wang et al., 2020). Failing to account for these confounding effects can lead to endogeneity problems and biased coefficient estimates.

Statistical analyses

Descriptive analyses of means and standard deviations of all variables were conducted using R (R Core Team, 2013). All other analyses were conducted with Mplus Version 8.7 (Muthén & Muthén, 1998–2017), which comprised three steps. First, in the preliminary analyses, the ten-factor latent structure of job crafting for JD-R (four factors; Tims et al., 2012) and off-job crafting for DRAMMA needs (six factors; Kujanpää et al., 2022) was investigated using CFA to assess the fit of these indicators. CFA model fit was examined with several recommended fit indices and statistical cut-offs (Hu & Bentler, 1999).

In the second phase, standardized factor scores from this fitted model of the CFA were used as profile indicators for the latent profile analysis (LPA) since these scores partially control for measurement errors (Morin, Boudrias, et al., 2016). LPA was used to examine whether different profiles (subgroups) among heterogenous employees can be identified based on their four job and six off-job crafting strategies. In particular, LPA identifies homogenous latent profiles based on the relationship between the observed variables in the multivariate continuous data and estimates model parameters for these profiles (Muthén & Muthén, 1998–2017). It is plausible that job vs. off-job crafting behaviours differ across profiles both quantitatively and qualitatively (i.e., absolute vs. relative differences in mean levels of each crafting dimension; Marsh et al., 2009). To address missing and non-normally distributed data in the

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[1]We repeated the analyses and included proactive personality as a background variable to examine its effects on the associations between the predictors and crafting profiles studied. The results showed a similar three latent profile solution quantitatively and qualitatively. Profile membership with higher levels of crafting is positively related to higher levels of work engagement and mental well-being across all profiles, although work engagement did not previously differ between least active and average crafters. As before, home developmental possibilities differed across all profiles. Unlike before, self-efficacy did not differ between average and least active profiles and social support did not differ between active and least active profiles. In sum, these results of the LPA and auxiliary predictor and outcome analyses were mostly similar to those obtained when excluding proactive personality (see Appendix B in the Data S1 for detailed information, https://doi.org/10.6084/m9.figshare.21286092).

LPA, model parameters was estimated using full information maximum likelihood (FIML) algorithm with robust standard errors (Muthén & Muthén, 1998–2017). Moreover, LPA analyses with unequal means and with both unequal and equal variances were conducted. Simulation studies show that LPAs with unequal variances yield less biased and increased accuracy of estimation than models with equal variances (e.g., Enders & Tofighi, 2008), therefore, means and variances were estimated freely across profiles in the selected final model.

To determine the number of latent profiles, the model fit was examined using theoretical reasoning and substantive meaning of the profiles, as well as various statistical criteria to avoid over-interpretation (see Table 1; Marsh et al., 2009; Nylund et al., 2007). For VLMR, LMR and BLRT, a statistically significant p-value ($p < .05$) indicates the k-1 profile solution should be rejected in favour of the k profile solution. Entropy refers to the classification accuracy to different groups, and the closer the value is to 1, the greater the difference between the profiles identified. A value greater than .70 is acceptable and closer to 1 is preferred (Celeux & Soromenho, 1996). Additional criteria used were the decline in model improvement and statistical adequacy of further profile solutions (e.g., absence of small/empty profiles yielding practical insignificance, negative residual variance estimates, estimation errors; e.g., Marsh et al., 2009).

Third, relations between the crafting profiles and their predictors (i.e., job, home and personal resources) as well as their outcomes (work engagement and mental well-being) were examined. The automatic three-step approach (R3STEP; Asparouhov & Muthén, 2014a) was used to examine whether an auxiliary predictor variable is positively associated with a higher probability of belonging to one profile than another, while considering model uncertainty and classification errors, and therefore providing less biased results. In the R3STEP, multinomial logistic regressions were first estimated in which latent profile membership was predicted by the selected demographic background covariates. Next, latent profile membership was regressed on job, home and personal resources variables controlling for these background variables.

To examine the associations between latent profile membership and outcomes, the BCH auxiliary correction method for continuous auxiliary variables (Asparouhov & Muthén, 2014b) was used. The BCH approach compares mean scores of outcomes using equality tests across all latent profiles and considers measurement errors of latent profile classification to determine any statistically significant differences. The LPA and the auxiliary predictors and outcomes analyses were estimated using maximum likelihood with robust standard errors (MLR; Muthén & Muthén, 1998–2017).

RESULTS

The means, standard deviations, reliabilities and intercorrelations of all variables are summarized in Table S1 (https://doi.org/10.6084/m9.figshare.21286092).

Confirmatory factor analyses

All measurement models were specified by allowing each item to load freely on its respective latent factor without constraints. The ten-factor measurement model with four and six dimensions of job and off-job crafting, respectively, fitted the data well ($\chi^2 = 1780.17$, df = 549, $p < .001$, RMSEA = .04, CFI = .93, TLI = .93, SRMR = .05). The Satorra-Bentler scaled difference chi-squared test (Satorra & Bentler, 2001) was used to compare the fit of the ten-factor measurement model with that of the nested one-factor model, where all 18 job and 18 off-job crafting items were loaded directly on the same factor. The ten-factor measurement model fitted the data significantly better than the one-factor model, $\Delta\chi^2$ (45) = 5430.62, $p < .001$.

TABLE 1 Latent profile similarity at Time 2.

Number of profiles	LL	FP	AIC	BIC	aBIC	VLMR (p)	LMR (p)	BLRT (p)	Entropy	Latent profile proportions (%)
1	−20,943.53	20	41,927.07	42,033.01	41,969.47	–	–	–	–	100
2	−18,952.60	41	37,987.20	38,204.38	38,074.14	<.001	<.001	<.001	.86	50/50
3	−17,915.28	62	35,954.55	36,282.97	36,086.02	.01	.010	<.001	.90	34/48/18
4	−17,360.79	83	34,887.59	35,327.25	35,063.58	.681	.682	<.001	.89	17/34/34/15
5	−16,974.44	104	34,156.88	34,707.78	34,377.40	.215	.215	<.001	.91	12/30/20/34/4
6	−16,636.43	125	33,522.85	34,184.99	33,787.90	.337	.341	<.001	.89	15/29/16/18/18/4
7	−16,351.49	146	32,994.97	33,768.35	33,304.55	.081	.082	<.001	.90	14/16/7/16/15/29/3
8	−16,113.62	167	32,561.24	33,445.86	32,915.35	.113	.114	<.001	.90	11/14/8/23/11/14/18/2
9	−15,896.50	188	32,169.00	33,164.86	32,567.64	.135	.136	<.001	.91	8/16/21/13/15/7/6/11/2
10	−15,715.28	209	31,848.56	32,955.65	32,291.72	.541	.543	<.001	.91	7/12/18/9/15/3/16/ 9/7/2

Abbreviations: aBIC, sample-size adjusted Bayesian information criterion; AIC, Akaike information criterion; BIC, Bayesian information criterion; BLRT, bootstrapped log-likelihood ratio test; FP, number of free parameters; LL, log-likelihood; LMR, Lo—Mendell—Rubin test; VLMR, Vuong-Lo—Mendell—Rubin test.

Latent profile analyses

Table 1 presents the fit indices and tests of LPA with unequal variances. Both VLMR and LMR tests converged on the two- and three-profile solution, while BLRT test did not converge on any specific profile solution. Due to the large sample size, BIC, aBIC and AIC did not reach their minimum point for any profile solutions and continued to decrease even up to the ten-profile solution. However, the elbow plot in Figure S1 (https://doi.org/10.6084/m9.figshare.21286092) indicated that the curve decreased sharply between one- to two-profile solutions and was approaching a plateau between three- to five-profile solutions. Average latent profile posterior probabilities varied only slightly between three- to five-profile solutions. Overall, these results suggest that the optimal number of profile solution was between three and five profiles, which was determined upon closer content examination. In the five-profile solution, the highest and second highest profile did not yield meaningful profiles theoretically. Moreover, the three- and four-profile solutions were similar, and the latter did not yield further meaningful content. Therefore, considering all available information, the three-profile solution was used for subsequent analyses.

Figures 1 and 2 present respectively the standardized vs. absolute mean scores for latent job and off-job crafting profile at Time 2. The standardized mean scores (Figure 1) represent relative differences with respect to the sample mean score for ease of comparison across the latent profiles in the sample, that is the number of standard deviations in which the absolute score is above or below the mean score. Also, the absolute mean scores (Figure 2) are presented to provide a quantitative measure of the similarity within the study and between studies. Comparing the absolute mean scores across different latent profiles enables researchers to visually assess how comparable or diverse the different profiles indicators are, including identifying distinctive features or outliers. Moreover, the pattern of differences observed across latent profiles may be replicated in future studies. In Figure 1, the first profile (least active crafters; 33.9%) was characterized by below sample average
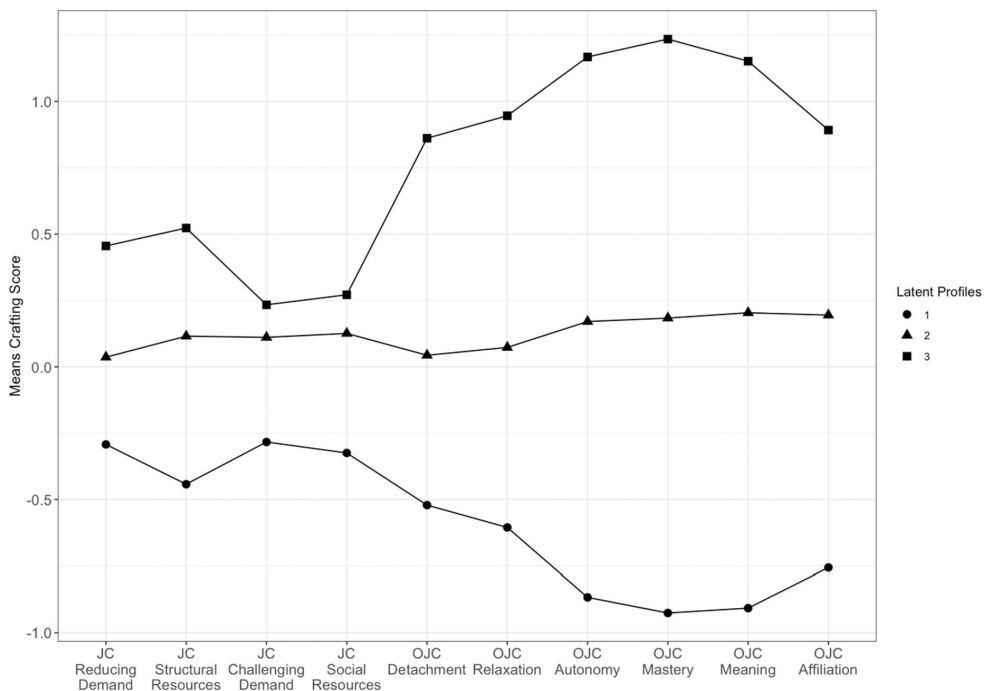

FIGURE 1 Standardized mean scores for latent job and off-job crafting profile at Time 2. JC, job crafting; OJC, off-job crafting.
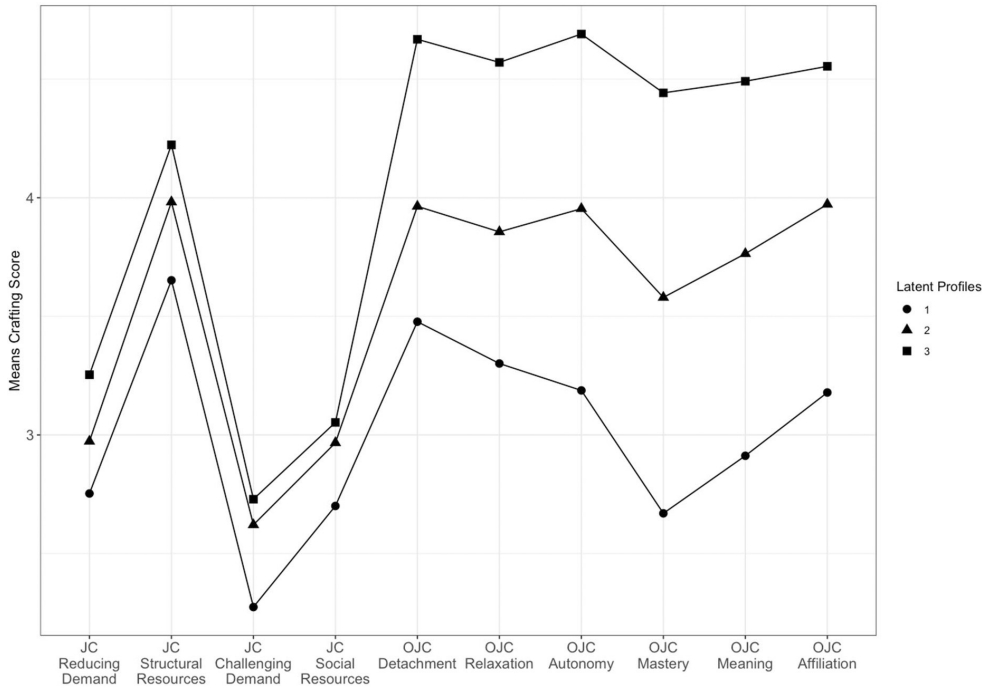
FIGURE 2 Absolute mean score for latent job and off-job crafting profile at Time 2. JC, job crafting; OJC, off-job crafting.

score on all job and off-job crafting subdimensions. In this profile, employees sought to craft for increasing structural job resources and for off-job detachment, relaxation, autonomy and affiliation but barely use job crafting for reducing hindering demands, increasing challenging demands, social job resources and off-job mastery and meaning (Figure 2). The second profile had the largest proportion of employees (48.2%, average crafters) who scored slightly above the sample average on all job and off-job crafting subdimensions (Figure 1). Employees used all job and off-job crafting strategies except crafting for increasing challenging job demands (Figure 2). The third profile (18.0%; active crafters) contained individuals with the highest above sample average job and off-job crafting behaviour across all crafting subdimensions (Figure 1). Figure 2 shows that this profile was characterized by the usage of all job and off-job crafting strategies with relatively heavy use of all off-job crafting rather than job crafting strategies, except for increasing challenging job demands. The three profiles did not intersect and had only differences in levels across both job and off-job crafting characteristics. We did not identify compensatory crafters but only average crafters. Off-job crafting subdimensions generally showed higher mean levels and a slightly larger variability than job crafting subdimensions across all three profiles. Notably, crafting for increasing challenging job demands was the lowest scoring strategy across all profiles. Altogether, in partial support of Hypothesis 1, we identified three profiles of active, average and least active crafters that differed quantitatively but were similar qualitatively.

Differences in job, home and personal resources between crafting profiles

According to Table S2 (https://doi.org/10.6084/m9.figshare.21286092), the results showed that no time-lagged background variables (T1) were associated with the likelihood of crafting profiles membership (T2). Table 2 shows the relations of lagged resource-related predictors (T1) with crafting

TABLE 2 Results from multinomial logistic regressions for the effects of predictors on profile membership.

	High versus low		High versus average		Average versus low	
	Coef. (SE)	OR	Coef. (SE)	OR	Coef. (SE)	OR
Job control	.06 (.12)	1.06	−.01 (.10)	.99	.07 (.09)	1.08
Job developmental possibilities	.14 (.13)	1.15	.02 (.11)	1.02	.12 (.10)	1.13
Colleagues support	−.03 (.15)	.97	.07 (.13)	1.07	−.09 (.11)	.91
Supervisor support	.05 (.13)	1.05	−.13 (.11)	.88	.18 (.10)	1.20
Home autonomy	.13 (.18)	1.13	.17 (.16)	1.18	−.04 (.11)	.96
Home developmental possibilities	1.33** (.17)	3.76	.47** (.13)	1.60	.86** (.13)	2.35
Home social support	.23* (.11)	1.26	.12 (.09)	1.13	.11 (.09)	1.12
Self-efficacy	1.74** (.34)	5.67	1.01** (.28)	2.76	.72** (.23)	2.06
Age	.01 (.01)	1.01	.01 (.01)	1.01	.01 (.01)	1.01
Gender	.28 (.19)	1.32	.08 (.17)	1.08	.21 (.15)	1.23
Education	−.15* (.08)	.86	−.10 (.07)	.91	−.06 (.06)	.95
Children	.20 (.12)	1.22	.07 (.10)	1.07	.13 (.09)	1.13
Tenure	0 (.00)	1	0 (.00)	1	0 (.00)	1
Organizational rank	.32 (.17)	1.38	.36 (.15)	1.43	−.04	.96

Note: The regression coefficients coef. and OR indicate the effect of the predictor on the probability of belonging to a target profile (first listed profile) versus belonging to the referent profile (second listed profile). Odds ratios (ORs) >1.00 suggests a higher probability of being a member of the target profile than the reference profile group. Odds ratios (ORs) <1.00 suggests a higher probability of being a member of the reference profile group compared with the target group. The predictors are estimated from standardized factor scores with a mean of 0 and standard deviation of 1.

Abbreviations: Coef., multinomial logistic regression coefficients; OR, odds ratio; SE, standard error of the coefficient.

*p < .05. **p < .01.

profiles membership (T2) controlling for background variables. Failing to support hypothesis 2a for the profiles identified, lagged job resources (i.e., control, developmental possibilities, colleagues' and supervisor's support) and home autonomy (T1) were not significantly associated with differences in crafting profiles membership (T2). In partial and full support of Hypothesis 2a and 2b, respectively, for the profiles identified, employees with lagged high home developmental possibilities and self-efficacy were most likely to subsequently belong to a profile with higher rather than lower level of crafting (i.e., active vs. average, active vs. least active, average vs. least active). Furthermore, lagged high home social support was also positively associated with subsequently belonging to the active versus least active crafters profile.

Differences in work engagement and mental well-being between crafting profiles

Table 3 shows crafting profile differences in subsequent work engagement and mental well-being. In partial support of Hypothesis 3a for the profiles identified, significant differences for work engagement (T3) were evident between active and least active crafters, as well as between average and least active crafters (T2). Active and average crafters (T2) did not differ in subsequent work engagement (T3). In full support of Hypothesis 3b for the profiles identified, active crafters (T2) had the highest subsequent mental well-being level (T3), average crafters (T2) had the second highest level and least active crafters (T2) reported the lowest level of mental well-being (T3). Pairwise comparisons revealed significant level differences in mental well-being across all lagged profiles.

TABLE 3 Differences in crafting profiles in work engagement and mental well-being.

Distal outcome variable	Least active crafters M (SE)	Average crafters M (SE)	Active crafters M (SE)	Wald's (2)/p-value	Profile differences
Work engagement	2.31 (.07)	3.07 (.06)	3.29 (.11)	95.43, $p < .001$	3>1***; 2>1***
Mental well-being	3.33 (.04)	3.82 (.03)	4.06 (.05)	190.17, $p < .001$	3>2***; 2>1***; 3>1***

Note: Profile differences column indicates significant pairwise mean differences. Mplus addresses missing data and non-normal data using the FIML method. Response scales 0–6 for work engagement and 1–5 for mental well-being. ***$p < .001$ with 1 = least Active Crafters, 2 = Average Crafters, 3 = Active Crafters.

Abbreviation: SE, standard error.

DISCUSSION

We used a person-centered approach to examine job and off-job crafting jointly based on two distinct theoretical models, and their time-lagged associations with resources and with well-being outcomes. The results revealed three job and off-job crafting profiles, underscored the importance of high external home resources and internal personal resources to stimulate crafting, and showed how high levels of job and off-job crafting are positively related to better occupational and mental well-being. Overall, these findings lend support to the combined use of distinct job and off-job crafting behaviours. Our findings also have important implications for theory and research regarding the type of resources that predict crafting profiles, which in turn predict well-being outcomes over time.

Main findings and theoretical implications

This study makes three theoretical contributions. The first and main contribution is that it extends the insights on the interconnectedness of the work and life domains, in which behaviours may be transferred from one domain to another, through spillover, compensatory and conflict mechanisms (Edwards & Rothbard, 2000). In particular, we build on the emerging field of crafting research spanning life domains (e.g., de Bloom et al., 2020; Demerouti et al., 2020) by using a person-centered approach to examine distinct job and off-job crafting profiles, allowing simultaneous exploration of crafting in work and non-work domains. The more multifaceted and diversified, flexible and autonomous nature of the non-work domain compared to the work domain, emphasizes the need for a broader crafting framework capturing crafting behaviours outside work, while also acknowledging the specificities of crafting behaviours at work. Applying two theoretical crafting models, the JD-R model for job crafting (Tims et al., 2012) and the needs-based crafting model for off-job crafting (de Bloom et al., 2020), we demonstrate their complementarity. Specifically, our results revealed three latent job and off-job crafting profiles that differed quantitatively (i.e., levels) but not qualitatively (i.e., similar shapes). We observed greater variability in and more extensive use of crafting strategies in the non-work than in the work domain across profiles, consistent with the variance observed for job crafting and home crafting using the JD-R model in variable-centered research (Haun et al., 2022). This suggests more opportunities and flexibility for crafting outside work than at work, aligning with earlier research showing that individuals use the non-work domain to realize needs and passions unfulfilled at work (Berg et al., 2010).

While we found no evidence for compensatory crafters, our results seem to imply that compensatory and spillover processes (Edwards & Rothbard, 2000; see also de Bloom et al., 2020) could work differently than hypothesized. That is, crafting strategies may be matching on subdimensions (e.g., social job resources vs. affiliation) between domains instead of matching on all strategies between domains (e.g., high job crafting vs. low off-job crafting). For example, increasing social job resources would satisfy relatedness needs (Bakker & Oerlemans, 2019) and if relatedness needs are already satisfied in the non-work domain, there would be less need to craft for increasing social job resources.

This is consistent with our findings of relatively higher mean score in off-job crafting for affiliation than job crafting for increasing social resources across all profiles. Supporting this relationship, Haun et al. (2022) demonstrated that 'increasing social resources' does indeed spill over from home to work domain. Likewise, 'increasing structural job resources' (i.e., job autonomy and skill variety) satisfies autonomy and competence needs (see Bakker & Oerlemans, 2019; Toyama et al., 2022), while 'reducing hindering job demands' satisfies psychological detachment and relaxation needs (see Kinnunen et al., 2011). Additionally, 'increasing challenging job demands' may lead to more mastery experiences, satisfying competence or mastery needs (see Toyama et al., 2022). Our findings of the relatively higher mean levels of off-job crafting for mastery than of job crafting for increasing challenging demands corroborates this. Our results also showed that crafters across all profiles hardly sought challenging job demands, in line with previous person-centered findings using the JD-R model (Mäkikangas, 2018). Supporting all these findings, earlier variable-centered research indicated that needs-based off-job crafting subdimensions were generally related to job crafting JD-R subdimensions (Kujanpää et al., 2022). Our study therefore builds on the principles of both JD-R and needs-based models, suggesting that crafting in both life domains is motivated by the underlying higher-order goal for intrinsic motivation to fulfil basic psychological needs and to promote personal growth and development (see Bakker & Demerouti, 2007; de Bloom et al., 2020; Deci & Ryan, 2000). Overall, our person-centered results indicated the co-varying nature of job and off-job crafting strategies, thereby suggesting the compatibility of JD-R and needs-based crafting frameworks and highlighting the importance of investigating these crafting strategies jointly across life domains.

Our second theoretical contribution is the support for interrelations of job, home and personal resources with crafting profiles in both work and non-work domains over time. Our study extends the understanding of the principles of proactive motivation model (Parker et al., 2010) from work to non-work activities. In particular, our results focus on the 'can do' pathway (self-efficacy) and the motivating role of distal contextual factors (autonomy, social support and developmental possibilities) across life domains in influencing proactive goal setting and behaviour maintenance. Additionally, we also draw on the JD-R theory (Bakker & Demerouti, 2017), which suggests that job resources motivate goal achievement, and the needs-based DRAMMA framework, which emphasizes the satisfaction of psychological needs for resource acquisition and personal development (see de Bloom et al., 2020). Accordingly, we also expand earlier variable-centered research by identifying the distinct effects of various job resources at multiple organizational levels on crafting (i.e., support from colleagues vs. supervisor at the group versus managerial level, autonomy and development opportunities at the organizational level; see Nielsen et al., 2017), and extend this to non-work resources. Our results showed that high home developmental possibilities and self-efficacy predicted profile membership of higher levels of crafting compared to lower levels across all profiles, implying that all employees use both external and internal resources to craft. In addition, employees with more social support at home are more likely to be active crafters than least active crafters, highlighting the importance of such support for proactive behaviours. Contrary to our predictions, job resources and home autonomy did not predict crafting profiles membership. While our findings supported the 'can do' pathway in the model of proactive motivation (Parker et al., 2010), the motivating role of distal contextual outcomes, particularly for home resources (i.e., developmental possibilities, social support), was only partially supported. Furthermore, our findings did not lend support to Demerouti et al. (2020)'s findings, in which daily home autonomy facilitated the compensatory effects of job crafting and its spillover effects to the home domain. According to the resource caravans concept (Hobfoll, 2011), resources do not exist separately but tend to develop and exist in combination, suggesting that employees with more resources have a wider range of choices to engage in crafting efforts. This reduces the likelihood of using job resources if other combinations produce stronger effects in stimulating crafting. Furthermore, as job and home resources are both external contextual resources (Hobfoll, 2002), home resources may have substituted for job resources across all crafting profiles. This is in line with the resource substitution hypothesis proposed by Ross and Mirowsky (2010), wherein a specific resource such as job resources has a stronger (weaker) impact when alternative resources such as home resources are lacking (present).

The third contribution relates to a better understanding of the role of crafting profiles for mental well-being and work engagement, offering a holistic view of employee engagement (Robertson & Cooper, 2010) through the motivational process of resources (see Bakker et al., 2023). We found that active crafters experienced the highest mental well-being of all other profiles and the highest work engagement than least active crafters, suggesting that well-being outcomes stemmed from using both job and off-job crafting strategies simultaneously, rather than focusing on either of the domains. We also found that active and average crafters did not differ on work engagement, suggesting diminishing returns for positive levels of work engagement beyond moderate crafting levels. These results extend earlier person-centered findings of Mäkikangas (2018), which identified two job crafting profiles, with higher crafting profiles associated with higher levels of work engagement compared with those in the lower profile. Our findings are consistent with earlier variable-centered research indicating that leisure crafting strengthens the positive relationship between job crafting and work engagement, implying simultaneous effects of crafting across work and non-work domains on promoting work engagement (Petrou et al., 2017). Regarding mental well-being, our results align with previous variable-centered research (e.g., Garg et al., 2021; Zhang et al., 2018), showing that crafting profiles are positively related to moderate to high levels of mental well-being. Lastly, while earlier variable- and person-centered studies extensively examined the association between crafting and work engagement (e.g., Mäkikangas, 2018; Rudolph et al., 2017), our findings imply that crafting research should also focus attention on mental well-being. Specifically, we found that crafting was associated with even higher levels of mental well-being compared with work engagement. In sum, our results underscore the importance of job and off-job crafting for occupational and mental well-being benefits, supporting positive cross-domain spillover effects of well-being outcomes (de Bloom et al., 2020).

Practical implications

Our study has three practical implications for employees and organizations. First, it suggests that we should consider both crafting in the work and non-work domains simultaneously, particularly their influence on each other when designing crafting interventions (e.g., Van den Heuvel et al., 2015). For example, past research found that off-job crafting interventions potentially improve well-being and performance in both work and non-work domains (Kosenkranius et al., 2020). Second, our results underscore the relative importance of promoting home and personal resources (i.e., developmental possibilities at home and self-efficacy) compared with job resources, such that more employees may become active crafters. For example, employees' generalized self-efficacy could be enhanced through interventions that focus on diminishing negative psychological states (Bresó et al., 2011). Third, our results suggest that least active crafters would benefit greatly from an effective social support system at home to stimulate crafting behaviours. For example, interventions could promote communication between partners related to work demands to facilitate understanding and social support after a demanding workday (Pluut et al., 2018). In sum, our findings underscore that crafting interventions should be complemented by organizational or community interventions aiming to improve employees' levels of resources across life domains (e.g., Van Wingerden et al., 2016). While we found that job resources are not as important as home and personal resources for stimulating crafting, they are still an important direct source for employees' well-being (e.g., Van Veldhoven et al., 2020).

Limitations and directions for future research

We discuss several limitations of our study. First, the person-centered approach such as LPA requires researchers to exercise their scientific judgement to identify the optimal number of profile solutions which correspond to both theory and data (Marsh et al., 2009). Additionally, LPA raises the question of sample-specific findings as it only identifies the subgroups present within a given sample (Morin, Meyer,

et al., 2016). Accordingly, our sample consists solely of German-speaking employees from Austria, Germany and Switzerland, and our findings may not be generalized to employees in other countries and cultural contexts. Previous studies have indicated cross-cultural and countries variations in crafting strategies between work and non-work domains (see de Bloom et al., 2020; Demerouti et al., 2020). We acknowledge the influence of societal and cultural context on work and non-work role identities, leading to differences in perceived needs discrepancies and crafting efforts. For example, in many cultures where women are often involved in demanding caretaking duties at home and have less leisure time and/or may work fewer hours than men (see de Bloom et al., 2020), they may engage in more off-job crafting than men (Kujanpää et al., 2021). Future studies may therefore consider the importance of society and culture in crafting behaviours beyond the scope of this study.

Second, our attrition analyses (Appendix A: Data S1; https://doi.org/10.6084/m9.figshare.21286092) revealed a non-random sampling over time and thus an attrition bias, in which participants who dropped out (i.e., completed one or two waves) were younger, had fewer years of tenure and scored lower on off-job crafting than those who stayed in all three waves. This attrition bias may have threatened the internal validity of our results, since age and tenure are associated with job crafting (e.g., Rudolph et al., 2017). However, compared with the participants who dropped out, our final sample is overall representative regarding demographics except for age and tenure. Also, FIML was used to make use of all available data and yields less biased estimates than other methods, such as listwise deletion and mean substitution (e.g., Newman, 2014). Thus, overall attrition seems to be of minor concern for our study. Yet, future studies could use interviews to examine reasons behind the attrition to supplement the earlier waves data of these participants, such that we can statistically model the attrition and mitigate attrition biases.

Third, this study was based on self-report surveys, which may introduce common method bias (Podsakoff et al., 2012). However, we used a time-lagged design thereby reducing the risk of common method bias. Fourth, using the three-step approach to examine auxiliary predictor and outcome variables in LPA implied that causality cannot be inferred as to whether crafting profile memberships were predicted by job, home and personal resources and predicted work engagement and mental well-being. Moreover, we note that in person-centered research, establishing causality is not emphasized or seen as crucial compared to in variable-centered research (Bergman & Lundh, 2015). Future studies should examine these relationships longitudinally to test whether similar crafting profiles can be identified and whether they change over time. Fifth, relating to the above view on causality, the direction of the association between resources and crafting remains unclear in our study. Recent research indicated reciprocal relationships between job crafting and intrinsic motivation (Zhang et al., 2023). Thus, future research (e.g., field experiments, interventions with control groups) could examine the causal relationships between crafting profiles and job, home and personal resources.

Sixth, while our study aimed to broaden the scope of personal and socio-environmental contextual factors, the types of resources we studied was limited, and we did not consider demands at work or at home and personality differences (e.g., Big-Five personality traits, regulatory focus) as confounding variables. Despite mounting evidence suggesting the moderation effects of job demands (i.e., work pressure; Petrou et al., 2012), as well as the positive associations of individual differences with job resources and job crafting (see Rudolph et al., 2017), we neglected these factors. Future research could integrate individual differences, demands at work and home, and include additional job and personal resources (e.g., leadership, psychological capital), which positively predicted job crafting (see Kerksieck et al., 2019; Tims et al., 2021). Leadership, which stimulates job crafting by enhancing employees' interpersonal work relationships, successful teamwork (Mäkikangas et al., 2017), personal resources and organizational identification (see Rudolph et al., 2017; Tims et al., 2021), would add valuable insights from the top-down perspective to the bottom-up perspective of job crafting. Lastly, as our crafting study greatly emphasizes the health motivational process using limited health and well-being outcomes, future studies could expand the scope by examining job and life satisfaction, or performance-related outcomes including work and task performance (see Demerouti & Bakker, 2023). Moreover, it would be useful also to investigate the health impairment process in future research, such as the relationship between crafting and job burnout.

CONCLUSION

We used a person-centered approach to simultaneously examine job and off-job crafting behaviours in employees. Our study showed that employees use various job and off-job crafting strategies jointly, most of them belonging to the profile of average job and off-job crafting. The different combinations of job and off-job crafting strategies are predicted by distinct levels of home and personal resources (i.e., developmental possibilities and social support at home, self-efficacy) and contribute differentially to employees' work engagement and mental well-being over time. Our results highlight that the combination of job and off-job crafting using distinct theoretical frameworks can yield new insights on crafting holistically across life domains and beneficial occupational and mental well-being outcomes. In practice, interventions to promote crafting itself should be complemented by interventions aiming to improve people's levels of resources in various life domains as key predictors of crafting. Taken together, our study contributes and emphasizes the value of using a person-centered approach to understand the reciprocal interaction of job and off-job crafting strategies and their implications for occupational and mental well-being.

AUTHOR CONTRIBUTIONS

Kang Leng Ho: Conceptualization; methodology; formal analysis; visualization; writing – original draft; writing – review and editing; data curation; resources; project administration. **Anne Mäkikangas:** Conceptualization; methodology; writing – review and editing; resources. **Philipp Kerksieck:** Conceptualization; investigation; supervision; writing – review and editing; resources. **Anja Isabel Morstatt:** Conceptualization; methodology; formal analysis; visualization; writing – review and editing; data curation; resources. **Jessica de Bloom:** Conceptualization; funding acquisition; supervision; writing – review and editing; resources. **Georg F. Bauer:** Conceptualization; funding acquisition; writing – review and editing; supervision; investigation; resources.

CONFLICT OF INTEREST STATEMENT

The authors report there are no competing interests to declare.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

ETHICS STATEMENT

Informed consent was obtained from all participants, guaranteeing their anonymity. For anonymous surveys on self-reported mental well-being and health, no ethical review was necessary under national, university or departmental rules (Department of Legal Services and Data Protection at the University of Zurich). The study was conducted under strict observation of ethical and professional guidelines.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

Data S1.

How to cite this article: Ho, K. L., Mäkikangas, A., Kerksieck, P., Morstatt, A. I., de Bloom, J., & Bauer, G. F. (2024). Job and off-job crafting profiles: Time-lagged relationships with job, home and personal resources and well-being outcomes. *Journal of Occupational and Organizational Psychology*, *97*, 952–976. https://doi.org/10.1111/joop.12506