Journal of Business and Psychology
https://doi.org/10.1007/s10869-025-10037-4

ORIGINAL PAPER

How Career Crafting Promotes Employee Well-being: The Role of Professional and Organizational Identification

Jie Li[1,2] · **Janne Kaltiainen**[1] · **Jari J. Hakanen**[1]

Accepted: 22 May 2025

Abstract

In the contemporary world of work, individuals are arguably increasingly responsible for maintaining the longevity of their careers. Recently, the concept of career crafting has emerged to describe how individuals may proactively shape their career paths, for example, by developing professional skills to remain employable in the uncertain labor markets. However, career crafting is empirically understudied, which limits its application to employee well-being practices. In the present study, we draw on the social identity approach to hypothesize that an increase in career crafting fosters increases in professional (PI) and organizational (OI) identification. In turn, increases in PI and OI lead to an increase in work engagement, a decrease in job boredom, and a decrease in burnout. We analyzed two-wave longitudinal survey data from the Finnish working population ($n = 842$) collected in 2021 and 2022. Most of our hypotheses were supported, as the latent change score modeling revealed that an increase in career crafting was associated with an increase in work engagement and a decrease in burnout via increases in PI and OI. However, an increase in career crafting was associated with a decrease in job boredom via increases in OI, but not via PI. Our study suggests that career crafting is a viable addition to the bottom-up approach to job design and encourages organizations to invest resources in employees' career crafting to foster their psychological attachment to work-relevant groups and, consequently, their well-being.

Keywords Career crafting · Professional identification · Organizational identification · Work engagement · Job boredom · Burnout · Latent change score modeling

In the world of non-permanent employment contracts and rapidly shifting skill requirements, it is important for employees to craft their careers, that is, proactively self-manage their careers (De Vos et al., 2020; Tims & Akkermans, 2020). For organizations, correspondingly, providing career development opportunities holds the potential for promoting employees' motivation and well-being (De Vos et al., 2019; Hameed et al., 2022). However, career crafting is a relatively new concept with limited evidence about its potential impact on different types of employee well-being, such as work engagement, job boredom, and burnout (e.g., Ge et al., 2023). Furthermore, the underlying mechanisms between career crafting and employee well-being remain unexplored. This gap limits the understanding and utilization of career crafting in developing workplaces and working life in general.

In addition to referring to proactive behaviors in shaping the characteristics of one's environment, crafting is also associated with social identities (Wrzesniewski & Dutton, 2001). In the present study, we draw on the social identity literature (Tajfel & Turner, 1979; Turner, 1985) to propose that career crafting strengthens employees' belongingness and psychological oneness with work-relevant groups, i.e., identification with their profession and organization (Ashforth & Mael, 1989). As a sense of belongingness is a crucial antecedent for well-being (Baumeister & Leary, 1995), we expect professional (PI) and organizational (OI) identification to promote employee well-being in terms of more work engagement, and less job boredom and burnout.

Additional supplementary materials may be found here by searching on article title https://osf.io/collections/jbp/discover

✉ Jie Li
jie.li@ttl.fi

[1] Work Ability and Working Careers, Finnish Institute of Occupational Health, Helsinki, Finland

[2] Faculty of Social Sciences, Tampere University, Tampere, Finland

Published online: 31 May 2025

We examine two-wave follow-up survey data collected from the Finnish working population in 2021 and 2022 ($n = 842$). By analyzing relations among within-person changes in latent constructs, we propose a dynamic process where an increase in career crafting is associated with improved employee well-being (an increase in work engagement, a decrease in job boredom, and a decrease in burnout) via increases in PI and OI (Fig. 1). With our study, we provide the following contributions.

First, we draw bridges between career crafting and social identity literature by demonstrating how career crafting may shape employees' identification in terms of PI and OI. Job crafting as a way to alter one's sense of self is an important theoretical notion of the crafting framework (Wrzesniewski & Dutton, 2001; Wrzesniewski et al., 2013), but this has yet to be examined in the broader context of career crafting. Furthermore, as individuals may define themselves holistically via multiple identities, literature in both job crafting and social identification calls for examinations of multiple foci of social identification (Ashforth, 2016; De Bloom et al., 2020). The existing research has mainly focused on relationships between job crafting, i.e., proactively altering one's current job (Tims et al., 2021), and OI (Ashforth et al., 2008). This focus limits the current theoretical, empirical, and practical understanding regarding crafting behaviors as a means to alter multiple aspects of the self-concept. In addition to OI, PI is another salient identification in the context of work, albeit it has received less attention (e.g., Greco et al., 2022). Since career crafting primarily focuses on one's professional domain, it is likely to have a significant impact on PI. However, it is unknown what kind of impact career crafting may have on employees' ties with their present organization in terms of OI.

Second, we add to the bottom-up approaches of promoting social identification. The majority of research on group identification in organizational psychology has focused on how organizations may promote employees' identification from the top-down, for instance, via fair leadership practices (Ashforth, 2016). Our study expands this understanding by examining the bottom-up approach, i.e., proactive actions that employees themselves may take to promote their identification with the organization and profession (e.g., Kaltiainen et al., 2022). By providing novel insights into how identification may be promoted in the work context, our study provides valuable practical and theoretical contributions to both social identity and crafting frameworks.

Third, we demonstrate how PI and OI may serve as underlying mechanisms linking career crafting to three types of affective-motivational well-being states at work: work engagement, job boredom, and burnout. While the existing evidence indicates that career crafting may promote work engagement (e.g., Lee et al., 2021), it is unclear if it can also mitigate job boredom (i.e., state of low activation at work) or burnout (i.e., state of exhaustion, mental distancing,

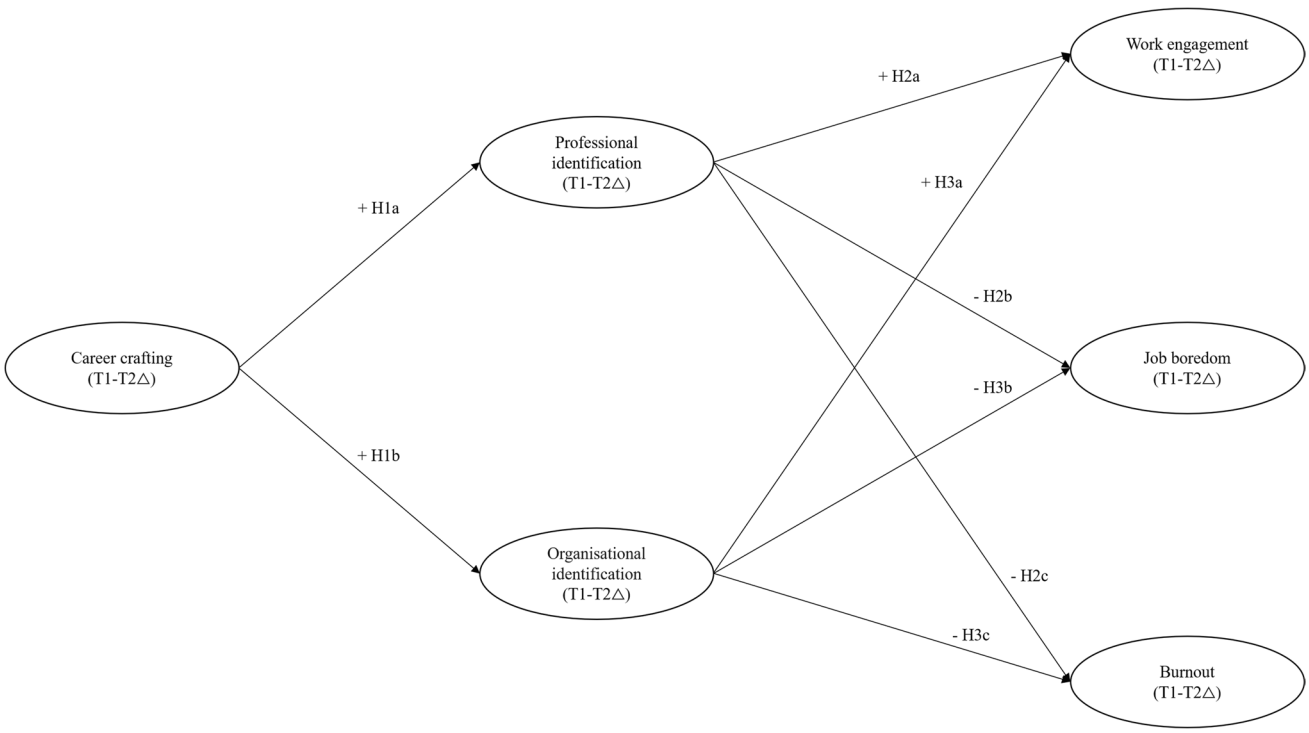

Fig. 1 Theoretical model of the present study. *Note.* H = hypothesis. T1-T2△ = within-person change in latent factor from time 1 to time 2

and cognitive and emotional impairment). Put differently, should career crafting be primarily viewed as a promoter of a positive-motivational well-being state, a mitigator of employee ill-being, or both? Thus, we expand the nomological network of career crafting by exploring its associations with a spectrum of motivational well-being states. In doing so, we provide evidence for practices that promote employee well-being holistically, which is recognized as one of the cornerstones of successful organizations (e.g., Grawitch et al., 2006).

What is Career Crafting?

Career crafting is defined as, "proactive behaviors that individuals perform to self-manage their career and that are aimed at attaining optimal person–career fit" (Tims & Akkermans, 2020, pp. 175–176). Tims and Akkermans (2020) present two major reasons for developing the concept of career crafting. First, there was a need to integrate various concepts of proactive career behaviors, which shared similarities but had evolved in isolation from each other. A comprehensive review by Jiang et al. (2022) reveals how proactive career literature has accumulated a variety of similar proactive career concepts over the past decades, such as career self-management, career competencies, career adaptability, career initiative, and career planning. These concepts share similarities by emphasizing individual agency, yet they also share distinctions, leading to conceptual ambiguity. Second, there was a need to broaden the perspective beyond crafting only one's current job. Whereas prior research had found job crafting to be associated with career-related outcomes such as perceived employability (Tims et al., 2012) and career success (Akkermans & Tims, 2017), examining career crafting offers insights into how individuals may directly shape their careers (Tims & Akkermans, 2020).

In addition to the target of crafting behaviors (i.e., one's current job vs. one's overall career), career crafting provides a more long-term perspective. It encompasses the overall development and future directions of one's career path compared to job crafting, which is limited to one's current work (Ge et al., 2023). Voluntary and involuntary job changes have become common, highlighting the importance of employability, such as the perception of being able to gain employment, as it helps maintain the longevity of one's career (De Vos et al., 2019, 2020; Tims & Akkermans, 2020). Put differently, the uncertain nature of contemporary work emphasizes the importance of long-term perspective in one's career management (De Vos et al., 2020).

Tims and Akkermans' (2020) initial definition of career crafting is relatively broad as it refers to proactively improving person-career fit. The notion of fit may encompass multiple aspects relevant to sustaining one's career, such as physical health, career satisfaction, performance, and employability (De Vos et al., 2020). Given the multitude of these aspects in contemporary careers, we argue that refining the focus on career crafting constructs helps specify relevant facets of career crafting and their specific outcomes. Considering how Tims and Akkermans (2020) build their career crafting definition around the notion of personal development, and recognizing that being able to gain employment is a fundamental aspect of sustaining contemporary careers (De Vos et al., 2019, 2020), we operationalize career crafting as proactive behaviors that are aimed at professional development. This includes aspects such as exploring possibilities to develop professional skills, setting professional goals, and striving to develop skills that are relevant to one's profession as well as work life in general.

A Social Identity Approach in Linking Career Crafting and Employee Well-Being

Ashforth and Mael (1989) define *social identification* as, "the perception of oneness or belongingness to some human aggregate" (p. 21). "Some human aggregate" refers, for instance, to group memberships through which individuals classify themselves to gain a sense of self (Turner, 1985). Thus, identification describes the degree of how central and important a given membership is to one's self-definition (Ashforth & Mael, 1989; Postmes et al., 2013). PI refers to a psychological oneness to a more abstract social group that shares, for example, similar training and qualifications, while OI refers to oneness with an organization, which is more concrete and local in terms of, for example, organizational values and co-workers (Ashforth et al., 2013; Hekman et al., 2009a). The salience of a given group membership for one's social identity may depend on the social context, yet individual behaviors may make specific groups more or less salient for their identification (Hogg & Terry, 2000).

In the early conceptualization of the crafting theory, Wrzesniewski and Dutton (2001) noted that job crafting may be driven by the need to acquire a positive sense of self at work. Later, Wrzesniewski et al. (2013) proposed theoretical pathways describing how employees may craft to fix preconceived identity misalignments, further develop their sense of self, or inadvertently discover other positive identities. Therefore, crafting one's work may alter the social environment of the job and also alter an individual's work identity (e.g., Kaltiainen et al., 2022).

We argue that career crafting represents proactive behavior that is relevant to one's perception as a professional and organizational member, i.e., makes them salient for shaping identification. Employees perceive their professional and organizational social categories as a set of context-dependent attributes that are typical for an ideal member (Hogg &

Turner, 1987; Ashforth et al., 2008). In the context of career crafting, employees aim to develop skills and attributes they perceive an ideal member of their profession would possess. We argue that when employees develop these valued attributes, they become more self-defining, i.e., they perceive to become more "one" with an ideal professional, which is indicated by an increase in PI (e.g., Ashforth et al., 2008). Career crafting is likely to foster attributes that are ideal for one's perception of a prototypical organizational member as well, which is indicated by an increase in OI. Hence, we present our first hypothesis:

Hypothesis 1: An increase in career crafting is associated with increases in (a) PI and (b) OI.

Several theories propose that a sense of belonging is essential for well-being (e.g., Baumeister & Leary, 1995; Deci & Ryan, 2000; Maslow, 1943). For example, relatedness is proposed as a universal need for psychological well-being and autonomous motivation (Ryan & Deci, 2017). According to the social identity approach, identification with groups motivates employees to work towards the groups' goals, as belonging to successful groups enhances their self-image (Tajfel & Turner, 1979; Tyler & Blader, 2003). In the context of work, identification with work-related groups may thus impact employees' affective-motivational states. Accordingly, existing empirical evidence has shown OI and PI to be associated with employee well-being (Greco et al., 2022; Lee et al., 2015; Riketta, 2005).

In the present study, we examine work engagement, job boredom, and burnout as indicators of employee well-being, which refer to different affective-motivational states at work (Hakanen et al., 2018; Russell, 1980). Work engagement consists of vigor, dedication, and absorption, which represent a positive affective and high activation state of employee well-being (Schaufeli et al., 2019). Job boredom is characterized as a state of low activation and unpleasantness, such as daydreaming and feeling that time passes slowly at work (Reijseger et al., 2013). Similarly, burnout is also characterized by low activation and unpleasantness consisting from exhaustion, mental distancing, and emotional and cognitive impairment (Schaufeli et al., 2020). Despite their similarities in activation and feelings, job boredom is considered a less intense state of well-being compared to burnout (Schaufeli & Salanova, 2014). Thus, job boredom and burnout reflect distinct ill-being states that might develop in different working conditions (e.g., Harju et al., 2022).

Building on our first hypothesis, and given the aforementioned empirical evidence on identification, we expect PI and OI to act as mediating mechanisms between career crafting and employee well-being. So far, studies have shown that career crafting is associated with employee well-being, but the evidence is limited to work engagement and cross-sectional studies (e.g., Chifor & Oprea, 2023; Lee et al., 2021). It is unknown whether career crafting might potentially mitigate employee ill-being in terms of job boredom and burnout. Recent literature on psychological well-being highlights the dual continua perspective, where health and illness are operationalized as separate dimensions (Iasiello et al., 2020; Keyes, 2005). In other words, the optimal employee well-being state consists of the presence of positive, as well as the absence of negative indicators of well-being. In our study, we simultaneously examine positive and negative indicators of employee well-being, which allows us to draw more comprehensive conclusions in terms of holistic employee well-being.

So far, crafting studies have sidelined social identification as a mediating mechanism between crafting and its outcomes. Considering how a sense of belongingness, such as PI and OI, may promote employee well-being and mitigate ill-being (e.g., Greco et al., 2022), and how career crafting might shape PI and OI, we argue that career crafting promotes social identification, which in turn, enhances employee well-being:

Hypothesis 2: An increase in career crafting is indirectly associated with (a) an increase in work engagement, (b) a decrease in job boredom, and (c) a decrease in burnout via an increase in PI.

Hypothesis 3: An increase in career crafting is indirectly associated with (a) an increase in work engagement, (b) a decrease in job boredom, and (c) a decrease in burnout via an increase in OI.

Method

Procedure and Participants

We analyzed two-wave survey data collected from the Finnish working population in the spring of 2021 and 2022 ($n = 842$). We achieved this by requesting the Finnish population register to randomly draw a sample of contacts based on the following sampling criteria. First, we limited our sampling to include Finnish citizens who listed one of the two official languages (Finnish or Swedish) as their primary language and resided in Finland. Second, the population register covered all citizens, both employed and non-employed. We focused on working-aged citizens, and therefore we excluded citizens who were under 23 from the study population, as they are less likely, on average, to have sufficient working experience. Furthermore, we excluded citizens who were over 65, as they were likely to be retired and thus not working, at least regularly. Lastly, young adults typically have a poor response rate in random population surveys. This raised concerns that our follow-up data might

be underrepresented by younger employees. We took measures to increase the likelihood of attaining young adults, which in the Finnish context generally refers to 23–34-year-olds. Namely, we requested the population register to draw a threefold larger sample of contacts from 23–34-year-olds compared to 35–65-year-olds.

In early 2021, the Finnish population register randomly drew 16,000 contacts from the Finnish population. The invitation to participate in the study, both in Finnish and Swedish, along with a printed survey was mailed in May 2021. In the invitation, we emphasized that participation was voluntary and that participants had the right to inspect and verify the correctness of their answers at any time. We also provided the contact information of the researchers, the Finnish population register, and the national office of the Data Protection Agency in case of any questions about the participants' rights. We instructed the participants to either fill out the paper survey and return it with the provided envelope, or complete the survey online using their unique identifier. Two reminder letters were sent during the data collection, which roughly lasted 1.5 months. 2738 (17%) participants completed the baseline survey in 2021 (T1). A follow-up survey was sent in April of 2022 (T2) to 2425 participants who agreed to be contacted again. The follow-up procedure was similar to the baseline, as collection lasted roughly 1.5 months and included two reminder letters. Altogether, 1221 participants returned the follow-up survey, which was 50% of the T1 respondents who were contacted again. Previously, two manuscripts were published from our data. The data transparency statement is provided in Appendix A.

For the analysis, we included participants who reported being in employment (full-time, part-time, or other) and reported 10 or more weekly working hours during both time points ($n = 842$). 31% ($n = 379$) were left out of the analysis as they, for example, reported being employed at T1 but not in T2. Sample characteristics are presented in Table 1. Before the main analysis, we examined whether participant attrition could pose a risk of biasing our results (Goodman & Blum, 1996). A detailed description of the analysis is presented in Appendix B. In sum, younger participants and those who had fewer total working years were more likely to drop out from our follow-up survey. However, as described below, we controlled for the effects of total working years and organizational tenure, which might alleviate some of the biases that are related to age.

Table 1 Sample Characteristics at T2

Variable	M/%	SD
Age	40	12.45
Gender		
Women	62%	
Men	38%	
Education[a]		
High	64%	
Low	36%	
Employment status		
Full-time	88%	
Part-time	11%	
Other	1%	
Weekly working hours	38	7.00
Organisational tenure	8	9.10
Working years	18	12.59
Changed jobs T1-T2	17%	

$n = 842$. M/% = mean estimate or distribution of the descriptive. *SD* standard deviation

[a]high education = university degree or higher, low education = secondary education or lower

Measures

A complete list of items and response scales is presented in Appendix C. Means, standard deviations, Cronbach's alphas, number of items, scales, and Pearson correlations are presented in Table 2.

Career crafting was measured with four items that we based on the Tims and Akkermans (2020) career crafting scale. From the original scale, we adopted two items that we rephrased to be more suitable in the Finnish context ("I explore possibilities to develop professional skills" and "I set professional goals"). To capture more comprehensively the proactive behaviors to develop one's professional competency (Tims & Akkermans, 2020), we developed two new items ("I strive to develop professionally" and "I strive to acquire skills and competencies that I may need in working life"). *PI* and *OI* were measured with four items drawn from Leach et al. (2008) and Postmes et al. (2013). The items were framed to the participants' professions and organizations in separate sections of the survey. PI was asked in a section titled "Profession and professional development" while OI was asked in the section titled "Me and my work". We drew three items from the Leach et al. (2008) In-Group Identification measure that reflects solidarity ("I feel solidarity with my [profession/organization]"), centrality ("Being a part of [profession/organization] is an important part of how I see myself"), and satisfaction ("I am glad to be [profession/organization]"). In addition, we added the Postmes et al. (2013) single-item measure of social identification, as recommended by the authors ("I identify with my [profession/organization]"). *Work engagement* was measured with the Ultra Short Measure for Work Engagement (Schaufeli et al., 2019). The measure has three items, one depicting each dimension of vigor, dedication, and absorption (e.g., "At my work, I feel bursting with energy"). *Job boredom*

Table 2 Means, standard deviations, Cronbach's alphas, and Pearson correlations

Variable	M	SD	α	Items	Scale	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Career crafting T1	3.95	0.81	0.88	4	1–5	-												
2. Career crafting T2	3.89	0.81	0.88	4	1–5	0.70***	-											
3. PI T1	3.77	0.92	0.91	4	1–5	0.30***	0.28***	-										
4. PI T2	3.72	0.95	0.92	4	1–5	0.26***	0.30***	0.65***	-									
5. OI T1	3.72	0.90	0.87	4	1–5	0.23***	0.20***	0.52***	0.35***	-								
6. OI T2	3.68	0.90	0.88	4	1–5	0.20***	0.24***	0.43***	0.47***	0.60***	-							
7. Work engagement T1	4.36	1.27	0.84	3	0–6	0.31***	0.27***	0.41***	0.31***	0.52***	0.39***	-						
8. Work engagement T2	4.31	1.28	0.84	3	0–6	0.29***	0.32***	0.33***	0.42***	0.36***	0.51***	0.62***	-					
9. Job boredom T1	3.07	1.47	0.80	3	0–6	−0.11**	−0.08*	−0.30***	−0.22***	−0.34***	−0.24***	−0.36***	−0.29***	-				
10. Job boredom T2	3.12	1.45	0.78	3	0–6	−0.14***	−0.15***	−0.29***	−0.31***	−0.26***	−0.34***	−0.32***	−0.36***	0.67***	-			
11. Burnout T1	2.25	0.56	0.72	12	1–5	−0.20***	−0.16***	−0.33***	−0.26***	−0.47***	−0.36***	−0.54***	−0.40***	0.45***	0.39***	-		
12. Burnout T2	2.27	0.57	0.74	12	1–5	−0.18***	−0.23***	−0.25***	−0.33***	−0.30***	−0.45***	−0.39***	−0.52***	0.34***	0.42***	0.68***	-	
13. Organisational tenure	7.77	9.10	-	1	-	−0.17***	−0.20***	0.04	0.06	0.04	0.02	0.01	0.00	−0.19***	−0.11**	0.02	0.05	-
14. Working years	18	12.59	-	1	-	−0.16***	−0.18***	0.09**	0.10**	0.01	0.02	0.07	0.08*	−0.31***	−0.25***	0.02	0.00	0.69***

$n = 842$. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

was measured with three items (e.g., "At work, time goes by very slowly") that were drawn from Reijseger et al. (2013). *Burnout* was measured with the twelve-item Finnish version of the Burnout Assessment Tool (Hadzibajramovic et al., 2022; Hakanen & Kaltiainen, 2022). The measure includes four core symptoms of burnout (exhaustion, mental distancing, cognitive impairment, and emotional impairment) that are measured with three items each (e.g., "At work, I feel mentally exhausted").

In our analysis, we controlled for the effects of *organizational tenure* and *working years* measured at T2. Organizational tenure was measured by asking "How many years have you worked in your current job?" and working years by,"In total, how many years have you been in paid employment since the age of 15? A rough estimate is sufficient". Both may reflect the length of membership in a given group and also, to some extent, the age of the participant, which may affect the variables in our model. For example, age is found to be associated with job crafting (Kooij et al., 2017) and employee well-being (e.g., Kaltiainen & Hakanen, 2022). Furthermore, the length of membership in a group is associated with stronger group identification (e.g., Riketta, 2005). Failing to control for such variables may increase the risk of spurious associations between the hypothesized variables (Rohrer, 2018). By including organizational tenure at T2, we also account for possible changes in jobs during the follow-up period.

Analysis

We tested our hypotheses by estimating *latent change score models* (LCSM) using maximum likelihood with robust standard errors in Mplus v.8 (Muthén & Muthén, 1998–2017). LCSM is a technique to estimate within-person changes over time in latent constructs (McArdle, 2009). In our study, T1 and T2 latent factors are indicated by their respective observed items. The residuals of the same items were allowed to covary over time, as recommended in repeated measures studies (Little & Card, 2013). Then, we estimate a higher-order latent change construct (T1-T2Δ) by 1) fixing the path estimate to 1 from the T2 factor, 2) fixing the residual variance of the T2 factor to 0, 3) fixing the path estimate to 1 from T1 to T2 factor, 4) estimating covariance between T1 and T1-T2Δ, and 5) estimating the T1-T2Δ intercept. The resulting T1-T2Δ represents a within-person change in a latent construct that is free of measurement error (Henk & Castro-Schilo, 2016). Hence, we examine how an average within-person change in one latent construct is associated with an average change in another construct. All T1-T2Δ variables are regressed to organizational tenure and working years to control for their effects. Furthermore, organizational tenure and working years are set to covary with all T1 latent constructs as they are likely to impact our study variables at baseline. Indirect effects are analyzed by calculating bias-corrected 95% confidence intervals using 2000 bootstrapped samples (Selig & Preacher, 2009).

Results

Preliminary Analyses

First, we conducted a confirmatory factor analysis to examine the factorial structure of our study variables (i.e., career crafting, PI, OI, work engagement, job boredom, and burnout). The latent factor of burnout was indicated by four indicators, which were the mean scores of exhaustion, mental distancing, cognitive impairment, and emotional impairment. The hypothesized model provided an adequate fit to our data ($\chi 2(df) = 2089.53$ (814), $p < 0.001$; Root Mean Square Error of Approximation (RMSEA) = 0.04; Comparative Fit Index (CFI) = 0.94; Tucker–Lewis Index (TLI) = 0.93; Standardized Root Mean Squared Residual (SRMR) = 0.05). In addition, the hypothesized model provided a superior fit in comparison with alternative factor models. For instance, a model where PI and OI items loaded on the same factor provided a poor fit with the data ($\chi 2(df) = 4352.73$ (835), $p < 0.001$; RMSEA = 0.07; CFI = 0.84; TLI = 0.82; SRMR = 0.08). So did a model where work engagement, job boredom, and burnout items loaded on the same factor ($\chi 2(df) = 3609.20$ (852), $p < 0.001$; RMSEA = 0.06; CFI = 0.88; TLI = 0.86; SRMR = 0.07). These findings supported the notion that the examined hypothesized constructs were empirically distinct from each other. In our hypothesized model, the modification indices suggested covariance between two item residuals of both PI and OI scales at both measurement times. These items were the same for both PI and OI measures: "I identify with my [profession/organization]" and "Being a part of [profession/organization] is an important part of how I see myself". The Postmes et al. (2013) item "I identify with my [Group]" is based on the notion of self-definition as they argue that this was the essence of identification and efficient enough to capture other relevant components of identification. In comparison, The Leach et al. (2008) identification measure were designed to capture multiple dimensions of identification of which the item "Being a part of [In-group] is an important part of how I see myself" reflects the centrality aspect, i.e., how central the social group is to one's self-definition. Both items shared similar content which provided the rationale for their residuals to covary. We allowed these covariances to account for this effect rather than removing either of the items. This model provided a satisfactory fit for our data (See Table 3: Configural).

Next, we conducted measurement invariance analysis to examine if changes in our latent variables could be biased by variability in item loadings and intercepts between T1

Table 3 Measurement invariance over time

	$\chi 2$ (df), p—value	RMSEA	CFI	TLI	SRMR	ΔCFI
Configural[a]	1917.22 (810), $p < 0.001$	0.04	0.95	0.94	0.05	
Metric[b]	1932.15 (826), $p < 0.001$	0.04	0.95	0.94	0.05	< 0.001
Scalar[c]	1990.67 (842), $p < 0.001$	0.04	0.95	0.94	0.05	0.002

$n = 842$

[a]Measurement model without constraints

[b]A model where factor loadings are constrained to be equal over time

[c]A model where factor loadings and intercepts are constrained to be equal over time

ΔCFI = change in CFI index compared to the previous model

and T2. The results are presented in Table 3. Based on the recommended threshold of CFI decrease < 0.01 (Cheung & Rensvold, 2002), we determined that the scalar model (equal factor loadings and intercepts over time) was supported and proceeded with this model to test our hypotheses.

Hypothesis Testing

The hypothesized full mediation model with control variables provided a satisfactory fit for our data (Fig. 2; $\chi 2(df) = 2465.76\ (939),\ p < 0.001$; RMSEA = 0.04; CFI = 0.94; TLI = 0.94; SRMR = 0.06). A partial mediation model, in which we included direct paths from career crafting to work engagement, job boredom, and burnout, did not increase model fit based on Satorra-Bentler $\chi 2$ difference test ($\Delta\chi 2\ (df) = 7.18\ (3)$, $p = 0.066$). Given the rule of parsimony, we preferred the full mediation model over the partial mediation model.

All path estimates from our study model (Fig. 2) are shown in Appendix D. As shown in Fig. 2, Hypotheses 1a and 1b gained support, as an increase in career crafting was associated with increases in PI (Hypothesis 1a) and OI (Hypothesis 1b). Also shown in Fig. 2 and Table 4, Hypothesis 2a and 2c gained support as an increase in

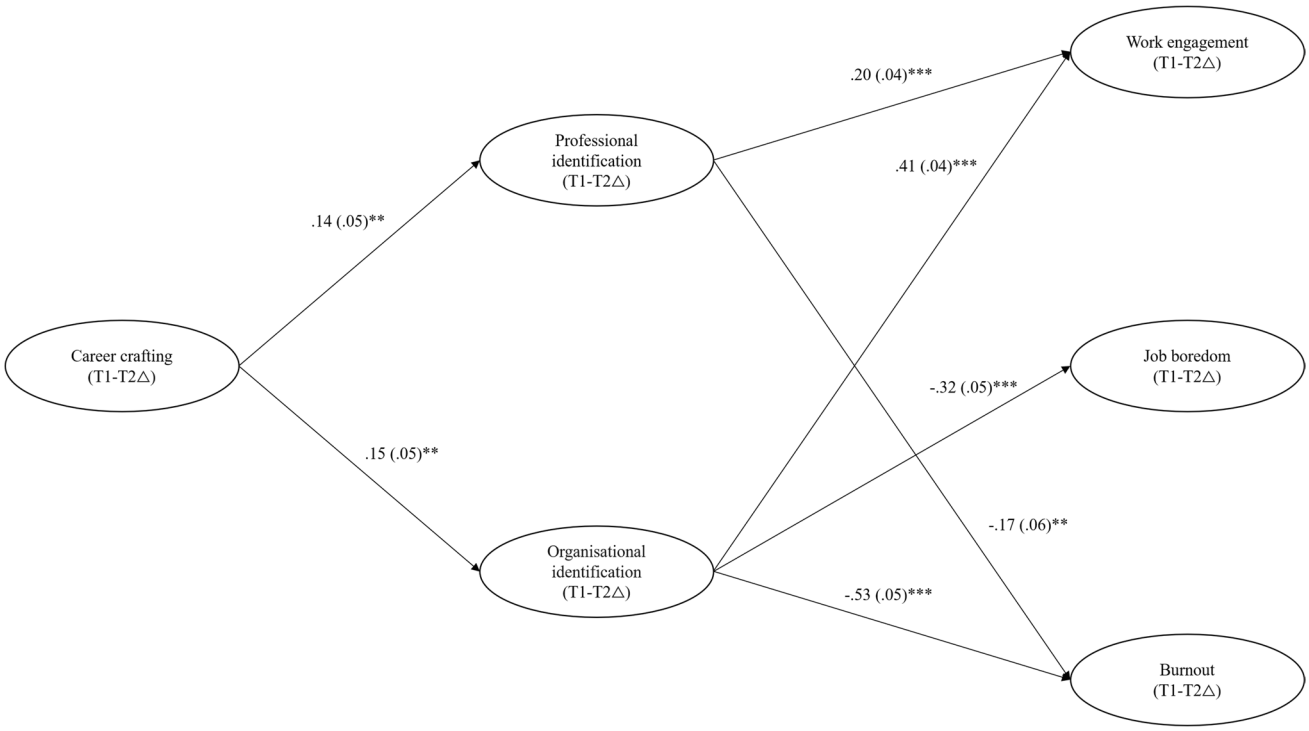

Fig. 2 Full Mediation LCSM. Note. $n = 842$. Standardized path estimates with standard errors in the parentheses are presented. T1-T2△ = within-person change in latent factor from time 1 to time 2. For clarity, we have omitted the non-significant path estimates from PI (T1-T2△) to Job boredom (T1-T2△), the non-significant path estimates of control variables (organizational tenure and working years), latent variables at T1 and T2, latent factors' items, and residual covariances between latent change scores (i.e., between PI and OI, and among employee well-being indicators). *** $p < .001$, ** $p < .01$

Table 4 Standardized coefficients for indirect effects

Indirect path	β (CI 95%)
Career crafting△ → PI△ → Work engagement△	0.03 [0.008, 0.058]
Career crafting△ → OI△ → Work engagement△	0.06 [0.021, 0.103]
Career crafting△ → PI△ → Job boredom△	−0.01 [−0.042, 0.004]
Career crafting△ → OI△ → Job boredom△	−0.05 [−0.087, −0.016]
Career crafting△ → PI△ → Burnout△	−0.02 [−0.059, −0.006]
Career crafting△ → OI△ → Burnout△	−0.08 [−0.137, −0.028]

$n = 842$. △ = within-person change in latent factor from time 1 to time 2

career crafting was indirectly associated with an increase in work engagement (Hypothesis 2a) and a decrease in burnout (Hypothesis 2c) via PI. However, an increase in career crafting was not indirectly associated with job boredom, and thus, Hypothesis 2b did not receive support (Table 4).

As shown in Fig. 2 and Table 4, Hypotheses 3a, 3b, and 3c gained support as an increase in career crafting was indirectly associated with an increase in work engagement (Hypothesis 3a), a decrease in job boredom (Hypothesis 3b), and a decrease in burnout (Hypothesis 3c) via OI.

Post Hoc Analyses

As our main findings indicate (Fig. 2), some path estimates are larger compared to others, indicating potential differences in the found relationships. We used the model constraint command in Mplus to test whether the differences in unstandardized path estimates were statistically significant (Muthén & Muthén, 1998–2017). The results showed that the path estimate from career crafting to PI is not significantly different compared to the path estimate from career crafting to OI (B difference = −0.01, $p = 0.880$). However, significant differences were found in path estimates between PI and OI to work engagement (B difference = −0.21, $p = 0.007$), job boredom (B difference = 0.20, $p = 0.017$), and burnout (B difference = 0.32, $p < 0.001$). In sum, with the path estimates shown in Fig. 2, these results suggest that OI had a potentially stronger impact on the three employee well-being outcomes compared to PI.

In addition, we examined if our results were sensitive to our imposed measurement model modifications (see Preliminary analyses) by repeating the analyses without the model modifications. As the results remained the same in terms of support for the hypotheses, this sensitivity analysis showed that our conclusions were not dependent on the applied model modifications (for detailed results, contact the first author).

Discussion

In the present study, we examined dynamic within-person processes and found an increase in career crafting to be mainly associated with improved employee well-being (increase in work engagement, decrease in job boredom, and decrease in burnout) via increases in PI and OI, while controlling for organizational tenure and working years. However, career crafting was not significantly associated with a change in job boredom via an increase in PI. Therefore, our examination of two-wave survey data from the Finnish working population supported all but one of the eight hypothesized associations.

Our study is the first to provide empirical evidence on how career crafting may shape multiple identifications simultaneously. By this, we answer calls to expand the examination from single foci of identification to multiple identifications. According to Ashforth (2016), work-related identification literature has overwhelmingly focused on OI amongst various foci of identification and states, "the overwhelming focus on the organization as the target of identification has created the erroneous impression that the organization is typically the most important target." (p. 365). Moreover, De Bloom et al. (2020) argue that work-related identity domains are not likely to be independent of each other, which implies that crafting may shape multiple related identities.

Our study provides a novel contribution to the timely concept of career crafting, given that career paths are moving away from working within the same organization for extensive periods (De Vos et al., 2020). By adopting the social identity perspective, we demonstrated an individual-level process of career crafting, which implies mutually beneficial outcomes for employees and organizations. This is because career crafting may improve employee well-being by strengthening their psychological bond to their profession and their organization. While job crafting has received the most attention among various crafting concepts (e.g., Demerouti & Bakker, 2013), our study suggests that organizations may consider expanding the bottom-up job design to account for employees' career development.

Career Crafting Sense of Self: The Complementary Nature of PI and OI

Our results suggest that career crafting may foster both PI and OI to the same extent, as indicated by our post-hoc analysis. Put differently, career crafting potentially not only fosters employees' oneness with their profession but also their psychological ties with the current employer. The identification literature suggests that OI is nested, i.e.,

it is embedded within PI as one's perception as a professional is likely to share common characteristics with their perception as an employee of the current organization (Ashforth et al., 2008; Ellemers & Rink, 2005; Gouldner, 1957). As noted by Rousseau (1990), an employee's PI and OI are not mutually exclusive but rather intertwined. In other words, one's professional and organizational memberships are likely to "jointly address the opposing desires for assimilation and uniqueness" (Ashforth et al., 2008, p. 356). Thus, one's self-definition as a professional (e.g., I am a veterinarian) is likely to be interrelated with one's self-definition as an employee of their current organization (e.g., I am a veterinarian at my local animal clinic). Overall, our study illustrates how career crafting may benefit a range of nested identities that commonly share a degree of similarity.

Due to the distinctions between PI and OI, one's professional and organizational identity domains may also be in conflict (e.g., Hekman et al., 2009b). The social identity literature suggests that individuals inherently aim to avoid conflicts between salient identities, as it is psychologically taxing (Ashforth et al., 2000). We believe that career crafting mitigates potential identity conflicts in terms of PI and OI, as it is a self-initiated form of behavior. Furthermore, career crafting adopts a long-term perspective that encompasses the whole career path, ranging from one's work history to potential development and changes in the future (Ge et al., 2023). Thus, when employees craft their careers, they may do so in a way that reduces identity conflicts between PI and OI. For example, one might perceive that their current work does not reflect their professional identity. However, in the context of career crafting, their current work serves as an essential part of one's career path as a whole, which might alleviate potential identity conflicts between PI and OI. Moreover, our construct of career crafting focuses on professional development, which we argue is relevant for the prototypical member of both professional and organizational social groups. As shown by our post-hoc analysis, career crafting may foster a psychological bond with both social groups (i.e., profession and organization) to a similar degree. In sum, career crafting may represent behaviors that do not reinforce the distinctions between PI and OI, but rather promote both (e.g., De Bloom et al., 2020).

Our study provides important implications for bottom-up job design. While organizational literature has focused on top-down practices in promoting OI (e.g., He & Brown, 2013), the focus has recently shifted to bottom-up approaches to addressing the question, "what are the various means through which bottom-up processes may in turn shape higher order identities?" (Ashforth et al., 2016, p. 366). For example, Kaltiainen et al. (2022) demonstrated how crafting social relationships at work may promote OI. Our study expands this notion by suggesting that crafting one's career may also foster both PI and OI, benefiting organizations and individuals by improving employee well-being. Furthermore, contemporary careers are increasingly employee-driven (De Vos et al., 2020), challenging the development of top-down practices that can be meaningfully generalized to all employees. It may be that certain top-down career practices may increase the risk of identity conflicts if they are perceived as irrelevant to one's career path. Such perception might impact one's holistic work-related self-definition in terms of PI and OI, which, in turn, may have consequences for well-being at work.

Improved Employee Well-being Through Career Crafting: The Role of PI and OI

Our study shows how changes in one's identification may explain the potential effects of career crafting on employee well-being. As we expected, career crafting may foster belongingness to one's professional and organizational social categories, which in turn potentially improves employee well-being. In line with the social identity literature, strengthening one's identification may influence one's motivation in working toward the group's goals (Tyler & Blader, 2003), which may be reflected in affective-motivational states in terms of increased work engagement and decreased job boredom and burnout. While our results indicate that both PI and OI may promote employee well-being, they may have slightly different roles. Whereas career crafting may promote work engagement and mitigate burnout via OI and PI, it may mitigate job boredom only via OI and not via PI. Furthermore, our post hoc analysis suggested that OI was more strongly associated with all three employee well-being indicators compared to PI.

Drawing from the notion of nested identities, PI and OI represent different levels of self, which could explain the differences in their predictive power on employee well-being. PI refers to a more abstract higher-order social group compared to OI (Gouldner, 1957), and it could be that a more localized social group, such as OI, includes more concrete objectives to be motivated for. For instance, Ullrich et al. (2007) propose the identity-matching principle, where the outcome is likely to be related to the same, i.e., matching level of identification. In their recent meta-analysis, Greco et al. (2022) found support for the identity-matching principle in terms of attitudinal outcomes at work, but could not determine if the matching principle would be applicable to behaviors or general well-being due to the lack of studies. Our results support the notion of the identity-matching principle, as unlike PI, OI was associated with job boredom. However, PI and OI were both related to improved work engagement and burnout, suggesting that PI has an additional effect on employee well-being over and above OI.

In sum, it is important to specify the appropriate identity domains when examining their associations to employee well-being. Adopting multiple identity perspectives in crafting as well as organizational studies in general is called for, as employees' identification might not emerge as "either-or" but rather as a set of nested identities, such as professional and organizational (e.g., Ashforth et al., 2008).

Practical Implications

Providing career development opportunities may be challenging for organizations due to the lack of a "typical career path" in the modern world of work. Our results suggest that organizations would benefit from a bottom-up approach that encourages employees to acquire new skills and, thus, craft their careers. Research shows that bottom-up job designs are facilitated by providing employees with the resources they need to shape their work (e.g., Tims et al., 2021). In terms of career crafting, these resources would have to reflect employees' long-term career goals, which might go beyond one's current organization in terms of professional development. Put differently, organizations should provide resources, such as time and opportunities for employees to shape their career paths, even if this may not directly benefit the current organization at the time. For organizations who might engage in risk/benefit reasoning while deciding to invest organizational resources in employees career development (e.g., De Cuyper & De Witte, 2011), our study suggests that career crafting may boost belongingness to the employer organization. Furthermore, Forrier et al. (2015) suggest that investing in employee employability promotes future job transitions within the internal job market, which is also beneficial to organizations. Albeit not the focus of the present study, the importance of PI and OI as mediating mechanisms calls for organizations to pay attention to teleworkers. In the aftermath of COVID-19, hybrid work has become a new normal, which may challenge employees' sense of belongingness (Thatcher & Zhu, 2006). Practitioners should observe if certain telework conditions may hinder employees' sense of belongingness, which may mitigate the potential well-being benefits of career crafting. Furthermore, practitioners could seek ways to promote belongingness among teleworkers by fostering career crafting.

Limitations and Future Studies

First, our study is limited in its ability to make causal inferences. While we captured the change in latent constructs between T1 and T2, the path estimates between these changes are based on correlational data. However, we limited the effects of measurement non-invariance by constraining factor loadings and intercepts to be equal over time, which strengthens our temporal inferences in estimating latent changes. Future studies should adopt longer follow-up periods with more measurement occasions to provide more understanding of the causal and dynamic effects between career crafting, social identification, and employee well-being.

Second, the inherent issue of survey studies is the potential biasing effect of an omitted variable that could explain the found associations. To combat this, we controlled the effects of organizational tenure and working years, which reflects the length of employees' membership in their professional and organizational social groups. These are known to be potential confounders in identification studies (Riketta, 2005).

Third, our study takes place in the late stages of the COVID-19 pandemic. The pandemic is suggested to be a global career shock (Akkermans et al., 2020), as uncertainty and involuntary job loss were prevalent. Our results may have been impacted by the pronounced salience of remaining employable during these times. However, our data consist of mostly full-time employees with an average tenure of 8 years (Table 1). Longer tenure might ease some of the insecurities during the time of the pandemic (Cheng & Chan, 2008). Future studies should examine whether our results can be replicated during more stable times.

Fourth and lastly, Tims and Akkermans' (2020) original career crafting measure included two dimensions (cognitive and behavioral) that were both measured with four items. To avoid respondent fatigue, we drew one item from both dimensions and developed two new items that comprehensively reflect the original construct (see Measures section). Furthermore, compared to the original measure, our career crafting construct has a narrower focus since it focuses on professional development. Considering our arguments on the importance of professional skills as aspects of prototypical members, our focus on professional development might explain the strength of the found association between career crafting and the two identifications (i.e., PI and OI). However, we argue that our modified measure is relevant in capturing the essence of career crafting, as it is based on the notion of personal development (e.g., Tims & Akkermans, 2020) and relates to sustaining one's career (e.g., De Vos et al., 2019, 2020). Future studies should examine whether broader measures of career crafting might have different impacts on different work-related identities. While our operationalization of career crafting is focused on professional development, there may be multiple relevant aspects in one's attempt to sustain their career, such as health, productivity, and employability (e.g., De Vos et al., 2020). Moreover, different conceptualizations of career crafting have emerged (e.g., Chifor & Oprea, 2023; Lee et al., 2021), and more conceptual work would be valuable in furthering the career crafting literature as a whole. Furthermore, future studies should simultaneously examine

career and job crafting, their temporal relationships, and their relative impact on different outcomes. Such integrated research designs contributes to fostering holistic organizational conditions that are mutually beneficial to employees' careers and organizations.

Future career crafting studies could utilize the social identity perspective in different designs related to multiple identities. As our study focuses on nested identity domains and highlights their common aspects in terms of professional development, work-related identities may also be cross-cutting with more universal perceptions of social groups based on, for example, gender and age (Ashforth et al., 2008). Examining cross-cutting identities might have implications for identity-related outcomes and it might be worth examining from a career crafting perspective, for example, by utilizing multi-group designs.

Another potential avenue to study is the environmental conditions that may moderate some of the associations between career crafting and work-related nested identities (e.g., professional, organizational, team, lunch group). Such designs could reveal potential conditions that may mitigate one's attempt to shape a holistic sense of self via multiple identities and thus, impact organizational and individual outcomes, such as employee well-being.

Conclusions

We examined a process where career crafting fosters PI and OI, which in turn, promotes employee well-being in terms of work engagement, job boredom, and burnout. Considering the growing interest in bottom-up approaches to job design, our study provides essential evidence on why organizations should foster employees' proactive attempts to shape their careers. Even though career crafting focuses on improving employees as professionals, our study draws attention to the potential complementary favorable impact on one's professional and organizational identity domains.

APPENDIX

A. Data Transparency

In the current manuscript (MS1), we have examined a sample that is collected as part of a larger longitudinal research project from 2021 to 2022. This sample consists of those who responded at both time points (T1: 2021 and T2: 2022), reported to be employed at both time points (full-time, part-time, or other), and reported at least 10 or more weekly working hours at both time points ($n = 842$). Previously, we have published a cross-sectional study (MS2) from the T1 data in 2023 ($n = 1357$) and a longitudinal study (MS3) which used data from both time points in 2024 ($n = 516$). Thus, these two studies (MS2 and MS3) examine different sets of data, as MS 2 is cross-sectional and MS3 is limited to participants that we defined as "young adults". Furthermore, research questions and analysis methods differ largely. For these reasons, we see that all three manuscripts make independent scientific contributions. Please see the table below for the comparison of the examined variables in these manuscripts.

References for MS 2 and MS 3:

MS 2: Li, J., Kaltiainen, J., & Hakanen, J. J. (2023). Overbenefitting, underbenefitting, and balanced: Different effort-reward profiles and their relationship with employee well-being, mental health, and job attitudes among young employees. *Frontiers in Psychology*, *14*, 1020494. https://doi.org/10.3389/fpsyg.2023.1020494

MS 3: Li, J., Kaltiainen, J., & Hakanen, J. J. (2024). Job boredom as an antecedent of four states of mental health: life satisfaction, positive functioning, anxiety, and depression symptoms among young employees - a latent change score approach. *BMC Public Health*, *24*(1), 907. https://doi.org/10.1186/s12889-024-18430-z

Data transparency table.

Variable in the dataset	MS 1 (present study)	MS 2 (Published)	MS 3 (Published)
Career crafting T1	X		
Career crafting T2	X		
Professional identification T1	X		
Professional identification T2	X		
Organizational identification T1	X	X	
Organizational identification T2	X		
Work engagement T1	X	X	
Work engagement T2	X		
Job boredom T1	X	X	X
Job boredom T2	X		X
Burnout T1	X	X	
Burnout T2	X		
Organizational tenure T2	X		
Working years T2	X		

B. Attrition Analysis

We compared our study sample ($n = 842$) to employees who reported at least 10 or more weekly working hours and only responded to T1 ($n = 1118$). Demographic characteristics and independent sample t-test results for mean

comparisons are shown in the tables below. Those who only responded to T1 were younger and had fewer working years. However, we controlled the effects of working years, which we also believe, captures some age-related aspects. While significant mean differences were found in PI and OI, these were rather small considering that these were measured on a 5-point Likert scale. Overall, we do not believe our results would be significantly biased by participant attrition.

	Study sample ($n = 842$)	T1 respondents ($n = 1118$)
Gender	62%	55%
Women	38%	45%
Men		
Education	64%	51%
High	36%	49%
Low		
Employment status	88%	86%
Full-time	11%	12%
Part-time	1%	2%
Other		

High education = university degree or higher, low education = secondary education or lower

t-test for equality of means

	Study sample ($n = 842$)	T1 respondents ($n = 1118$)			
Variable	**M (SD)**	**M (SD)**	**t**	**df**	**p-value**
Age	38.47 (12.45)	36.01 (11.31)	-4.50	1712.98	< 0.001
Work hours	37.46 (7.00)	37.17 (7.56)	-0.87	1876.95	0.382
Career crafting	3.95 (0.81)	3.92 (0.83)	-0.76	1819.00	0.450
Professional identification	3.77 (0.92)	3.63 (0.96)	-3.42	1954.00	< 0.001
Organizational identification	3.72 (0.90)	3.62 (0.96)	-2.21	1855.49	0.027
Work engagement	4.36 (1.27)	4.28 (1.34)	-1.50	1854.28	0.135
Job boredom	3.07 (1.47)	3.08 (1.49)	0.21	1953.00	0.837
Burnout	2.25 (0.56)	2.24 (0.56)	-0.08	1946.00	0.936
Organizational tenure	7.45 (8.94)	6.72 (8.25)	-1.82	1695.64	0.069
Working years	17.00 (12.59)	14.89 (11.12)	-3.85	1683.30	< 0.001

C. Measurement Instruments

Career crafting

Based on Tims and Akkermans (2020) career crafting scale

Scale: 1 = Fully disagree, 2 = Slightly disagree, 3 = Neither agree nor disagree, 4 = Slightly agree, 5 = Fully agree

I strive to develop professionally

I explore possibilities to develop my professional skills

I strive to acquire skills and competencies that I may need in working life

I set professional goals

Professional and organizational identification (Leach et al., 2008; Postmes et al., 2013)
The items are framed in the context of the participants' profession and organization in separate sections of the survey
Scale: 1 = Fully disagree, 2 = Slightly disagree, 3 = Neither agree nor disagree, 4 = Slightly agree, 5 = Fully agree
I am glad to be [In-group]
I feel solidarity with my [In-group]
Being a part of [In-group] is an important part of how I see myself
I identify with my [In-group]
Work engagement (Schaufeli et al., 2019)
Scale: 0 = Never, 1 = few times in a year, 3 = once a month, 4 = few times in a month, 5 = once a week, 6 = daily
At my work, I feel bursting with energy
I am enthusiastic about my job
I am immersed in my work
Job boredom (Reijseger et al., 2013)
Scale: 0 = Never, 1 = Few times in a year, 3 = Once a month, 4 = Few times in a month, 5 = Once a week, 6 = Daily
At work, time goes by very slowly
I feel bored at my job
During work time I daydream
Burnout (Hadzibajramovic et al., 2022; Hakanen & Kaltiainen, 2022)
Scale: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always
At work, I feel mentally exhausted
After a day at work, I find it hard to recover my energy
At work, I feel physically exhausted
I struggle to find any enthusiasm for my work
I feel a strong aversion towards my job
I'm cynical about what my work means to others
When I'm working, I have trouble concentrating
At work, I have trouble staying focused
I make mistakes in my work because I have my mind on other things
At work, I feel unable to control my emotions
I do not recognize myself in the way I react emotionally at work
At work I may overreact unintentionally

D. Complete List of Path Estimates of our Study Model

	β (SE), p-value
Career crafting△ → PI△	0.14 (0.05), p = 0.006
Career crafting△ → OI△	0.15 (0.05), p = 0.002
PI△ → Work engagement△	0.20 (0.04), $p < 0.001$
OI△ → Work engagement△	0.41 (0.04), $p < 0.001$
PI△ → Job boredom△	-0.08 (0.07), p = 0.202
OI△ → Job boredom△	-0.32 (0.05), $p < 0.001$
PI△ → Burnout△	-0.17 (0.06), p = 0.002
OI△ → Burnout△	-0.53 (0.05), $p < 0.001$
Organizational tenure → Career crafting△	-0.04 (0.06), p = 0.560
Working years → Career crafting△	0.01 (0.06), p = 0.905
Organizational tenure → PI△	0.03 (0.06), p = 0.535
Working years → PI△	0.01 (0.05), p = 0.886
Organizational tenure → OI△	-0.05 (0.06), p = 384
Working years → OI△	0.05 (0.06), p = 0.366
Organizational tenure → Work engagement△	-0.05 (0.05), p = 0.393
Working years → Work engagement△	0.04 (0.05), p = 0.406
Organizational tenure → Job boredom△	0.08 (0.06), p = 0.155
Working years → Job boredom△	0.06 (0.06), p = 0.268
Organizational tenure → Burnout△	0.10 (0.06), p = 0.079
Working years → Burnout△	-0.10 (0.06), p = 0.108

△ = within-person change in latent factor from time 1 to time 2

Author Contributions Conceptualization: Jie Li, Janne Kaltiainen, Jari Hakanen; Data curation: Jie Li, Janne Kaltiainen, Jari Hakanen; Formal analysis: Jie Li, Janne Kaltiainen; Funding acquisition: Janne Kaltiainen, Jari Hakanen; Investigation: Jie Li, Janne Kaltiainen, Jari Hakanen; Methodology: Jie Li, Janne Kaltiainen; Supervision: Janne Kaltiainen, Jari Hakanen; Writing – original draft: Jie Li, Janne Kaltiainen, Jari Hakanen.

Funding This study was funded by Finnish Institute of Occupational Health (grant number 3549403).

Data Availability The data will be made available through Finnish Social Science Data Archive after 2025.

Declarations

Conflict of interest The authors declare that they have no conflict of interest.

Ethics Approval This study was performed in line with the principles of the Declaration of Helsinki. Approval was granted by the Ethics Committee of Finnish Institute of Occupational Health (No. 3549403).

Consent to Participate Informed consent was obtained from all individual participants included in the study.

References

Akkermans, J., & Tims, M. (2017). Crafting your career: How career competencies relate to career success via job crafting. *Applied Psychology, 66*(1), 168–195. https://doi.org/10.1111/apps.12082

Akkermans, J., Richardson, J., & Kraimer, M. L. (2020). The Covid-19 crisis as a career shock: Implications for careers and vocational behavior. *Journal of Vocational Behavior, 119*, 103434. https://doi.org/10.1016/j.jvb.2020.103434

Ashforth, B. E., & Mael, F. (1989). Social Identity Theory and the Organization. *The Academy of Management Review, 14*(1), 20–39. https://doi.org/10.2307/258189

Ashforth, B. E. (2016). Distinguished scholar invited essay: Exploring identity and identification in organizations: Time for some course corrections. *Journal of Leadership & Organizational Studies, 23*(4), 361–373. https://doi.org/10.1177/1548051816667897

Ashforth, B. E., Kreiner, G. E., & Fugate, M. (2000). All in a day's work: Boundaries and micro role transitions. *Academy of Management Review, 25*(3), 472–491. https://doi.org/10.5465/amr.2000.3363315

Ashforth, B. E., Harrison, S. H., & Corley, K. G. (2008). Identification in organizations: An examination of four fundamental questions. *Journal of Management, 34*(3), 325–374. https://doi.org/10.1177/0149206308316059

Ashforth, B. E., Joshi, M., Anand, V., & O'Leary-Kelly, A. M. (2013). Extending the expanded model of organizational identification to occupations. *Journal of Applied Social Psychology, 43*(12), 2426–2448. https://doi.org/10.1111/jasp.12190

Ashforth, B. E., Schinoff, B. S., & Morgeson, F. P. (2016). Identity under construction: How individuals come to define themselves in organizations. *Annual Review of Organizational Psychology and Organizational Behavior, 3*(1), 111–137. https://doi.org/10.1146/annurev-orgpsych-041015-062322

Baumeister, R. F., & Leary, M. R. (1995). The need to belong. *Psychological Bulletin, 117*(3), 497–529. https://doi.org/10.1037/0033-2909.117.3.497

Cheng, G.H.-L., & Chan, D.K.-S. (2008). Who suffers more from job insecurity? A meta-analytic review. *Applied Psychology, 57*(2), 272–303. https://doi.org/10.1111/j.1464-0597.2007.00312.x

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling: A Multidisciplinary Journal, 9*(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5

Chifor, R. I., & Oprea, B. (2023). Romanian version of the career crafting assessment: Psychometric properties. *Journal of Career Assessment, 31*(4), 812–832. https://doi.org/10.1177/10690727231163322

De Cuyper, N., & De Witte, H. (2011). The management paradox. *Personnel Review, 40*(2), 152–172. https://doi.org/10.1108/00483481111106057

De Bloom, J., Vaziri, H., Tay, L., & Kujanpaa, M. (2020). An identity-based integrative needs model of crafting: Crafting within and across life domains. *Journal of Applied Psychology, 105*(12), 1423–1446. https://doi.org/10.1037/apl0000495

De Vos, A., Akkermans, J., spsampsps Van der Heijden, B. (2019). From occupational choice to career crafting. In *The Routledge Companion to Career Studies* (pp. 128–142). https://doi.org/10.4324/9781315674704-11

De Vos, A., Van der Heijden, B. I. J. M., & Akkermans, J. (2020). Sustainable careers: Towards a conceptual model. *Journal of Vocational Behavior, 117*, 103196. https://doi.org/10.1016/j.jvb.2018.06.011

Deci, E. L., & Ryan, R. M. (2000). The what and why of goal pursuits: Human needs and the self-determination of behavior. *Psychological inquiry*, *11*(4), 227–268.

Demerouti, E., & Bakker, A. B. (2013). Job Crafting. In *An Introduction to Contemporary Work Psychology* (pp. 414–433). https://doi.org/10.1002/9781394259564.ch17

Ellemers, N., spsampsps Rink, F. (2005). Identity in Work Groups: The Beneficial and Detrimental Consequences of Multiple Identities and Group Norms for Collaboration and Group Performance. In S. R. Thye spsampsps E. J. Lawler (Eds.), *Social Identification in Groups* (Vol. 22, pp. 1–41). Emerald Group Publishing Limited. https://doi.org/10.1016/S0882-6145(05)22001-5

Forrier, A., Verbruggen, M., & De Cuyper, N. (2015). Integrating different notions of employability in a dynamic chain: The relationship between job transitions, movement capital and perceived employability. *Journal of Vocational Behavior, 89*, 56–64. https://doi.org/10.1016/j.jvb.2015.04.007

Ge, X. L., Gao, L., & Yu, H. B. (2023). A new construct in career research: Career crafting. *Behavioral Sciences, 13*(1), 49. https://doi.org/10.3390/bs13010049

Goodman, J. S., & Blum, T. C. (1996). Assessing the non-random sampling effects of subject attrition in longitudinal research. *Journal of Management, 22*(4), 627–652.

Gouldner, A. W. (1957). Cosmopolitans and locals: Toward an analysis of latent social roles I. *Administrative Science Quarterly, 2*(3), 281–306. https://doi.org/10.2307/2391000

Grawitch, M. J., Gottschalk, M., & Munz, D. C. (2006). The path to a healthy workplace: A critical review linking healthy workplace practices, employee well-being, and organizational improvements. *Consulting Psychology Journal: Practice and Research, 58*(3), 129–147. https://doi.org/10.1037/1065-9293.58.3.129

Greco, L. M., Porck, J. P., Walter, S. L., Scrimpshire, A. J., & Zabinski, A. M. (2022). A meta-analytic review of identification at work: Relative contribution of team, organizational, and professional identification. *Journal of Applied Psychology, 107*(5), 795–830. https://doi.org/10.1037/apl0000941

Hadzibajramovic, E., Schaufeli, W., & De Witte, H. (2022). Shortening of the burnout assessment tool (BAT)-from 23 to 12 items using content and Rasch analysis. *BMC Public Health, 22*(1), 560. https://doi.org/10.1186/s12889-022-12946-y

Hakanen, J., & Kaltiainen, J. (2022). *Työuupumuksen arviointi Burnout Assessment Tool (BAT)-menetelmällä*. Työterveyslaitos.

Hakanen, J. J., Peeters, M. C. W., & Schaufeli, W. B. (2018). Different types of employee well-being across time and their relationships with job crafting. *Journal of Occupational Health Psychology, 23*(2), 289–301. https://doi.org/10.1037/ocp0000081

Hameed, I., Ijaz, M. U., & Sabharwal, M. (2022). The impact of human resources environment and organizational identification on employees' psychological well-being. *Public Personnel*

Management, 51(1), 71–96. https://doi.org/10.1177/0091026021001397

Harju, L. K., Van Hootegem, A., & De Witte, H. (2022). Bored or burning out? Reciprocal effects between job stressors, boredom and burnout. *Journal of Vocational Behavior, 139*, 103807. https://doi.org/10.1016/j.jvb.2022.103807

He, H., & Brown, A. D. (2013). Organizational identity and organizational identification: A review of the literature and suggestions for future research. *Group & Organization Management, 38*(1), 3–35. https://doi.org/10.1177/1059601112473815

Hekman, D. R., Bigley, G. A., Steensma, H. K., & Hereford, J. F. (2009a). Combined effects of organizational and professional identification on the reciprocity dynamic for professional employees. *Academy of Management Journal, 52*(3), 506–526. https://doi.org/10.5465/amj.2009.41330897

Hekman, D. R., Steensma, H. K., Bigley, G. A., & Hereford, J. F. (2009b). Effects of organizational and professional identification on the relationship between administrators' social influence and professional employees' adoption of new work behavior. *Journal of Applied Psychology, 94*(5), 1325–1335. https://doi.org/10.1037/a0015315

Henk, C. M., & Castro-Schilo, L. (2016). Preliminary detection of relations among dynamic processes with two-occasion data. *Structural Equation Modeling: A Multidisciplinary Journal, 23*(2), 180–193. https://doi.org/10.1080/10705511.2015.1030022

Hogg, M. A., & Turner, J. C. (1987). Intergroup behaviour, self-stereotyping and the salience of social categories. *British journal of social psychology*, *26*(4), 325–340.

Hogg, M. A., & Terry, D. J. (2000). Social Identity and Self-Categorization Processes in Organizational Contexts. *The Academy of Management Review, 25*(1), 121–153. https://doi.org/10.2307/259266

Iasiello, M., van Agteren, J., & Cochrane, E. M. (2020). Mental Health and/or Mental Illness: A Scoping Review of the Evidence and Implications of the Dual-Continua Model of Mental Health. *Evidence Base, 2020*(1), 1–45. https://doi.org/10.21307/eb-2020-001

Jiang, Z., Wang, Y., Li, W., Peng, K. Z., & Wu, C. H. (2022). Career proactivity: A bibliometric literature review and a future research agenda. *Applied Psychology, 72*(1), 144–184. https://doi.org/10.1111/apps.12442

Kaltiainen, J., & Hakanen, J. (2022). Changes in occupational well-being during COVID-19: The impact of age, gender, education, living alone, and telework in a Finnish four-wave population sample. *Scandinavian Journal of Work, Environment & Health, 48*(6), 457–467. https://doi.org/10.5271/sjweh.4033

Kaltiainen, J., Virtanen, A., & Hakanen, J. J. (2022). Social courage promotes organizational identification via crafting social resources at work: A repeated-measures study. *Human Relations*. https://doi.org/10.1177/00187267221125374

Keyes, C. L. (2005). Mental illness and/or mental health? Investigating axioms of the complete state model of health. *Journal of Consulting and Clinical Psychology, 73*(3), 539–548. https://doi.org/10.1037/0022-006X.73.3.539

Kooij, D. T. A. M., van Woerkom, M., Wilkenloh, J., Dorenbosch, L., & Denissen, J. J. A. (2017). Job crafting towards strengths and interests: The effects of a job crafting intervention on person–job fit and the role of age. *Journal of Applied Psychology, 102*(6), 971–981. https://doi.org/10.1037/apl0000194

Leach, C. W., van Zomeren, M., Zebel, S., Vliek, M. L., Pennekamp, S. F., Doosje, B., Ouwerkerk, J. W., & Spears, R. (2008). Group-level self-definition and self-investment: A hierarchical (multicomponent) model of in-group identification. *Journal of Personality and Social Psychology, 95*(1), 144–165. https://doi.org/10.1037/0022-3514.95.1.144

Lee, E.-S., Park, T.-Y., & Koo, B. (2015). Identifying organizational identification as a basis for attitudes and behaviors: A meta-analytic review. *Psychological Bulletin, 141*(5), 1049–1080. https://doi.org/10.1037/bul0000012

Lee, J. Y., Chen, C. L., Kolokowsky, E., Hong, S., Siegel, J. T., & Donaldson, S. I. (2021). Development and Validation of the Career Crafting Assessment (CCA). *Journal of Career Assessment, 29*(4), 717–736. https://doi.org/10.1177/10690727211002565

Little, T. D., & Card, N. A. (2013). *Longitudinal structural equation modeling*. Guilford Press.

Maslow, A. H. (1943). A theory of human motivation. *Psychological review*, *50*(4), 370.

McArdle, J. J. (2009). Latent variable modeling of differences and changes with longitudinal data. *Annual Review of Psychology, 60*, 577–605. https://doi.org/10.1146/annurev.psych.60.110707.163612

Muthén, L. K., & Muthén, B. O. (1998–2017). Mplus User's Guide. Eight Edition. *Los Angeles, CA: Muthén & Muthén*.

Postmes, T., Haslam, S. A., & Jans, L. (2013). A single-item measure of social identification: Reliability, validity, and utility. *British Journal of Social Psychology, 52*(4), 597–617. https://doi.org/10.1111/bjso.12006

Reijseger, G., Schaufeli, W. B., Peeters, M. C., Taris, T. W., van Beek, I., & Ouweneel, E. (2013). Watching the paint dry at work: Psychometric examination of the Dutch Boredom Scale. *Anxiety Stress and Coping, 26*(5), 508–525. https://doi.org/10.1080/10615806.2012.720676

Riketta, M. (2005). Organizational identification: A meta-analysis. *Journal of Vocational Behavior, 66*(2), 358–384. https://doi.org/10.1016/j.jvb.2004.05.005

Rohrer, J. M. (2018). Thinking clearly about correlations and causation: Graphical causal models for observational data. *Advances in Methods and Practices in Psychological Science, 1*(1), 27–42. https://doi.org/10.1177/2515245917745629

Rousseau, D. M. (1990). New hire perceptions of their own and their employer's obligations: A study of psychological contracts. *Journal of Organizational Behavior, 11*(5), 389–400. https://doi.org/10.1002/job.4030110506

Russell, J. (1980). A circumplex model of emotions. *Journal of Personality and Social Psychology, 39*, 1161–1178.

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory : Basic psychological needs in motivation, development, and wellness*. The Guilford Press.

Schaufeli, W. B., & Salanova, M. (2014). Burnout, Boredom and Engagement in the Workplace. In M. C. W. Peeters, J. De Jonge, & T. W. Taris (Eds.), *An Introduction to Contemporary Work Psychology* (pp. 293–320). Wiley Blackwell.

Schaufeli, W. B., Shimazu, A., Hakanen, J., Salanova, M., & De Witte, H. (2019). An ultra-short measure for work engagement. *European Journal of Psychological Assessment, 35*(4), 577–591. https://doi.org/10.1027/1015-5759/a000430

Schaufeli, W. B., Desart, S., & De Witte, H. (2020). Burnout assessment tool (BAT)-development, validity, and reliability. *International Journal of Environmental Research and Public Health, 17*(24), 9495. https://doi.org/10.3390/ijerph17249495

Selig, J. P., & Preacher, K. J. (2009). Mediation models for longitudinal data in developmental research. *Research in Human Development, 6*(2–3), 144–164. https://doi.org/10.1080/15427600902911247

Tajfel, H., & Turner, J. C. (1979). An integrative theory ofintergroup conflict. In S. Worchel & W. C. Austin (Eds.), *The Social Psychology of Group Relations* (pp. 33–47). Brooks-Cole.

Thatcher, S. M. B., & Zhu, X. (2006). Changing Identities in a Changing Workplace: Identification, Identity Enactment, Self-Verification, and Telecommuting. *Academy of Management Review, 31*(4), 1076–1088. https://doi.org/10.5465/amr.2006.22528174

Tims, M., Bakker, A. B., & Derks, D. (2012). Development and validation of the job crafting scale. *Journal of Vocational Behavior, 80*(1), 173–186. https://doi.org/10.1016/j.jvb.2011.05.009

Tims, M., & Akkermans, J. (2020). Job and Career Crafting to Fulfill Individual Career Pathways. In J. W. Hedge & G. W. Carter (Eds.), *Career pathways: from school to retirement* (pp. 165–190). Oxford University Press. https://doi.org/10.1093/oso/9780190907785.003.0010

Tims, M., Twemlow, M., & Fong, C. Y. M. (2021). A state-of-the-art overview of job-crafting research: Current trends and future research directions. *Career Development International, 27*(1), 54–78. https://doi.org/10.1108/cdi-08-2021-0216

Turner, J. C. (1985). Social categorization and the self-concept: A social-cognitive theory of group behaviour. In E. J. Lawler (Ed.), *Advances in Group Processes: Theory and Research* (pp. 77–122). JAI press.

Tyler, T. R., & Blader, S. L. (2003). The group engagement model: Procedural justice, social identity, and cooperative behavior. *Personality and Social Psychology Review, 7*(4), 349–361. https://doi.org/10.1207/S15327957PSPR0704_07

Ullrich, J., Wieseke, J., Christ, O., Schulze, M., & Van Dick, R. (2007). The identity-matching principle: Corporate and organizational identification in a franchising system*. *British Journal of Management, 18*(s1), S29–S44. https://doi.org/10.1111/j.1467-8551.2007.00524.x

Wrzesniewski, A., & Dutton, J. E. (2001). Crafting a job: Revisioning employees as active crafters of their work. *Academy of Management Review, 26*(2), 179–201.

Wrzesniewski, A., LoBuglio, N., Dutton, J. E., & Berg, J. M. (2013). Job Crafting and Cultivating Positive Meaning and Identity in Work. In *Advances in Positive Organizational Psychology* (pp. 281–302). https://doi.org/10.1108/s2046-410x(2013)0000001015