School principals' job crafting profiles and their differences during the prolonged COVID-19 pandemic

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Abstract

Purpose – The purpose of this study was to explore school principals' job crafting profiles during the prolonged COVID-19 crisis in 2021, and investigate profile differences regarding principals' own perceived servant leadership, stress and work meaningfulness.

Design/methodology/approach – Using latent profile analysis (LPA), two job crafting profiles were identified: (1) active crafters (55%) and (2) average crafters (45%). By auxiliary measurement-error-weighted-method (BCH), we examined whether and how job crafting profiles differed in terms of servant leadership, stress and work meaningfulness.

Findings – Active crafters reported higher than the overall mean level of approach-oriented job crafting (increasing job resources and demands), whereas average crafters reported an overall mean level of approach-oriented job crafting. Avoidance-oriented job crafting by decreasing hindering job demands did not differentiate the two profiles. Active crafters reported significantly higher servant leadership behavior, stress and work meaningfulness than average crafters.

Originality/value – Study findings provide new knowledge and reflect the implications that the unprecedented pandemic had for education. This study contributes to the existing literature within the scholarship of job crafting through empirical research during the prolonged COVID-19 pandemic. For practitioners, these study findings reflect contextual constraints, organizational processes and culture, and leadership in workplaces.

Keywords Job crafting, Servant leadership, COVID-19, Stress, Work meaningfulness, Principal

Paper type Research paper

Introduction

In the pre-COVID-19 era, one major challenge among school principals in Finland and Estonia was the development of the learning community and curriculum development (Tirri *et al.*,

2021). During the worldwide COVID-19 pandemic, the education system was shaken, and principals had to react fast to continuously changing regulations in the unprecedented situation (Reimers, 2022). During 2020 and 2021, schools were constantly challenged by new requirements of health security practices, and education was forced to rethink and change teaching practices from in-person to remote and hybrid models (MoEC and THL, 2020–2021; Wang *et al.*, 2021; Weiner *et al.*, 2021). Health security practices concerned, for example, securing social distancing during school days and lunch breaks, re-organizing lessons, renewing teaching practices, supervising hygiene practices (e.g. using masks and disinfectants) and informing parents about changing regulations (MoEC and THL, 2020–2021). In Finland, principals also had to organize lunch delivery to students who were in quarantine at home, as free school lunch is in the Finnish educational legislation (Ministry for Foreign Affairs and Finnish National Agency for Education, 2019; MoEC and THL, 2020–2021; Basic Education Law, Perusopetuslaki 1998/628 § 31).

During the first COVID-19 year 2020, most Finnish school principals (77%) reported high or altered levels of stress measured by principals' stress profiles concerning the school community's ability to cope during the pandemic (Upadyaya *et al.*, 2021). Principals also reported decreased work engagement compared to the earlier principal barometer in 2019 (Salmela-Aro *et al.*, 2020; Upadyaya *et al.*, 2020). At the same time principals' support and leadership style were the main job resources for teachers to cope during the pandemic (Lavonen and Salmela-Aro, 2022; Pollock, 2020). The role of leadership and principals' renewing their own behavior became essential.

Job crafting behavior is characterized by balancing job demands and job resources (Nissinen *et al.*, 2022) by doing self-initiated changes that employees can make in their jobs (Tims and Bakker, 2010; Wrześniewski and Dutton, 2001). Some previous studies exist examining job crafting among teachers (Dash and Vohra, 2019; van Wingerden *et al.*, 2017a, b), however, research on school principals' job crafting profiles is still lacking (see exception Toyama *et al.*, 2023). It is possible that job crafting behaviors may vary among school principals; for example, it has been found that some groups of managers (Mäkikangas and Schaufeli, 2021) and rehabilitation center employees (Mäkikangas, 2018) employ overall highly active job crafting strategies, whereas some groups of managers and employees employ varying job crafting strategy combinations. Thus, exploring job crafting strategy combinations among school principals may bring out new knowledge and support principals and educational organizations to maximize the benefits of job crafting in principals' leadership work during crisis (Toyama *et al.*, 2022).

Uncertain situation, like crisis, increase the importance of balancing principals' workload and the emotional burden (Ahtiainen *et al.*, 2022). It is shown that job crafting has helped school principals' adaptation to changes before COVID-19 pandemic and in the beginning of the pandemic (Toyama *et al.*, 2023). However, job crafting profiles among school principals did not significantly change from pre-pandemic (2019) to the early stages of the pandemic (2020) (Toyama *et al.*, 2023).

COVID-19 crisis altered job demands and the importance of job resources in the education sector (Demerouti and Bakker, 2022) and to the authors knowledge no study has investigated school principals' job crafting profiles during prolonged crisis, i.e. the crisis had lasted for over a year. The frequency and pattern of job crafting behavior may change in different phases of the crisis as the increase of unique demands could cause stimuli and incentive that lead to different kind of job crafting (Renkema *et al.*, 2023). Therefore, it is important to study whether constant changes in principals' job demands and the prolonged situation may have depleted principals' resources (Hobfoll, 1989) and affected the ways principals crafted their jobs (Lazazzara *et al.*, 2020; Knight *et al.*, 2021; Renkema *et al.*, 2023).

The context of this study is disruption and change in education. Unpredictable disruptions such as pandemic, war, energy crisis or economic recession, will bring new

demands for people to face also in the future. Therefore, workplaces should be seen as environments for continuous learning (Harteis, 2022). We investigate school principals' behavior, and their leadership role was acknowledged by exploring their own servant leadership, which is an employee empowering leadership style (van Dierendonck, 2011) and shown to associate with job crafting, which further associates with managers' perceptions of work (Yang *et al.*, 2017).

Previous research of school principals during COVID-19 crisis emphasized the importance of adaptivity (Pollock, 2020), proactivity (McLeod and Dulsky, 2021) and the need of learning for all (Ahtiainen *et al.*, 2022). Consequently, the present study examines how school principals implement this kind of workplace learning (Nissinen *et al.*, 2023) by investigating principals' job crafting profiles during a prolonged crisis and explores profile differences regarding servant leadership, stress and work meaningfulness. These study findings contribute to theory and practitioners by reflecting how contextual constraints, organizational processes and culture or leadership style may affect the way we renew work by job crafting.

Job crafting

Job crafting is based on job demands-resources (JD-R) theory (Demerouti *et al.*, 2001), which suggests that all job characteristics are seen as demands or as resources which may influence employee well-being and job performance in work (Bakker and Demerouti, 2007; Demerouti *et al.*, 2001). JD-R theory explains how demands and resources evoke two different psychological processes, which eventually affect individual and organizational outcomes (Schaufeli and Bakker, 2004). The first process is called the Health Impairment Process in which demanding aspects of work may lead to severe mental health problems and, e.g. to longer job absenteeism (Bakker *et al.*, 2007). The second process is called the Motivational Process in which job resources may lead to positive outcomes (Schaufeli and Bakker, 2004) e.g. increase in work engagement and decrease in job boredom (Harju *et al.*, 2018).

Job crafting is conceptualized using a role-based or resource-based perspective. Role-based crafting focuses more on changes in work meaningfulness (Wrześniewski and Dutton, 2001), whereas resource-based crafting focuses on balancing job resources and demands (Tims *et al.*, 2012). Despite the difference in job crafting perspectives, both describe job crafting behavior as increasing or decreasing job boundaries (Zhang and Parker, 2019). Job crafting may occur in low or high autonomy occupations (Wrześniewski and Dutton, 2001; Harju *et al.*, 2018; Kuijpers *et al.*, 2020) and it aims to balance job resources and demands through four different strategies (Tims *et al.*, 2012; Tims and Bakker, 2010): (1) increasing structural job resources (e.g. developing own competencies or job autonomy), (2) increasing social job resources (e.g. asking for feedback or professional collaboration), (3) increasing challenging job demands (e.g. seeking new challenges or interesting projects) and (4) decreasing hindering job demands (e.g. shortening working hours or limiting emotionally draining meetings).

The job crafting hierarchy organizes these four strategies into proactive approach-oriented job crafting (increasing job resources and job demands) and withdrawal or optimizing kind of avoidance-oriented job crafting (decreasing hindering job demands) (Zhang and Parker, 2019). Approach-oriented job crafting is typically associated with an employee's work engagement (de Beer *et al.*, 2016) and task-level job performance (Guan and Frenkel, 2018), whereas avoidance-oriented job crafting is typically seen as work avoidance (Mäkikangas and Schaufeli, 2021; Robledo *et al.*, 2019), or as a coping behavior (Lazazzara *et al.*, 2020), or as an optimizing behavior (Demerouti and Peeters, 2018; Nissinen *et al.*, 2022).

Store managers' job crafting has been shown to positively relate with work performance (Shin *et al.*, 2020) and with managers' psychological capital (Cenciotti *et al.*, 2017). Managers

have also reported to experience more psychological constraints toward job crafting than other employees (Berg *et al.*, 2010). For example, to be effective, principals should focus on the schools' core processes: curriculum and instruction, communication and good relationships (Daniëls *et al.*, 2019), but during a crisis, the daily management dominated, which have posed challenges to principals' participation in organizational decision-making and further to autonomous job crafting (Wang *et al.*, 2018). Previously, it has been found that managers craft their jobs more frequently than employees (Roczniewska and Puchalska-Kamińska, 2017) and 70% of municipal managers mainly employ approach-oriented job crafting, whereas 30% employ avoidance-oriented job crafting by decreasing hindrance job demands (Mäkikangas and Schaufeli, 2021). A typical manager's job crafting profile has included both avoidance- and approach-oriented job crafting, but the field of educational leadership has a lack of evidence concerning job crafting and leadership during crisis (Striepe and Cunningham, 2021; Toyama *et al.*, 2023).

Servant leadership

Servant leadership is an approach to power that does not focus on using power to control in an authoritarian way but instead uses power to help others become empowered and self-determined (van Dierendonck, 2011; Greenleaf, 1977). Servant leaders emphasize fostering employee development while also holding them accountable for the outcomes—to encourage trying new approaches in work. Servant leaders have a humble attitude to learn, and they are willing to admit their mistakes; they also express their true values and focus on the larger good of the institution (van Dierendonck and Nuijten, 2011).

In education, servant leadership has mainly been investigated in association with teachers' empowerment (Van der Hoven *et al.*, 2021), teachers' job satisfaction (Cerit, 2009) and with higher education leaders' readiness in the COVID-19 pandemic (Al-Asfour *et al.*, 2022). Servant leadership is explored extensively in other industries, and it has shown to be positively related with overall job crafting (Khan *et al.*, 2021), organizational citizenship behavior (Walumbwa *et al.*, 2010), innovative work behavior (Khan *et al.*, 2021; Panaccio *et al.*, 2015b), employees' well-being (Harju *et al.*, 2018; Kaltiainen and Hakanen, 2022), life satisfaction (Upadyaya *et al.*, 2016), lower levels of job stress (Jaramillo *et al.*, 2009) and leader effectiveness (Zhang *et al.*, 2021).

Servant leadership increases employees' organizational commitment behavior (OCB), which, in turn, may reduce leaders' workload and promote their well-being (Bavik *et al.*, 2017). In addition, research in the hospitality industry showed that servant leadership had significant benefits for internal and external stakeholders via employee job crafting (Bavik *et al.*, 2017). However, associations between servant leadership and avoidance-oriented job crafting were not found (Lichtenthaler and Fischbach, 2018). Instead of exploring employees' experiences about servant leadership, this study fills the research gap and explores leaders' own perceived servant leadership, and its differences in their job crafting profiles.

Work meaningfulness

Principals' psychological needs, such as need for relatedness, sense of intimacy, autonomy and community spirit (Bakker and Oerlemans, 2019), may have an effect on work meaningfulness by increasing growth- and purpose-oriented focus toward work (Steger *et al.*, 2012) and the amount of attached significancy toward work (Rosso *et al.*, 2010). There is no full consensus over the definition of meaningful work (Bailey *et al.*, 2019), but it may be considered a positive psychological state associated with work motivation (Rosso *et al.*, 2010), high job satisfaction, well-being and low risk of job turnover (Bailey *et al.*, 2019; Steger *et al.*, 2012). Indeed, the meaning of work has outcomes for work behavior and individual performance (Wrześniewski and Dutton, 2001; Wrześniewski *et al.*, 2003), experiences of

empowerment, stress and organizational identification (Rosso *et al.*, 2010). Further, employees with low meaningfulness may withdraw themselves from work (Steger *et al.*, 2012) and become bored if workload or pace prevents them from focusing on the things that they perceive as meaningful in their work (Harju and Hakanen, 2016).

Reducing job demands has shown to be detrimental to principals' basic psychological needs (Toyama *et al.*, 2022) but work meaningfulness may be increased by making small changes at work (Wrześniewski and Dutton, 2001). By actively seeking challenging job demands, principals may satisfy psychological needs, for example their intrinsic motivation (Toyama *et al.*, 2022). Earlier research implies that daily job crafting and increasing job resources may be important for individuals' basic psychological needs (Bakker and Oerlemans, 2019) and work meaningfulness grows when multiple relevant enhancing sources are combined (Montani *et al.*, 2020; Rosso *et al.*, 2010). Also, interpersonal relationships at work (Rosso *et al.*, 2010) and feedback from supervisors and coworkers significantly contribute to work meaningfulness (Montani *et al.*, 2020).

Aims
Different job crafting strategies can be used simultaneously (Mäkikangas, 2018). Therefore, the present study applied a person-oriented approach, which allowed to explore what kinds of job crafting combinations, latent homogeneous profiles, principals utilized (Tims *et al.*, 2021). Further, we explored how these profiles differed regarding principals' own perceived servant leadership, stress and work meaningfulness. The specific research questions were:

RQ1. What kinds of job crafting profiles can be identified among school principals during the prolonged COVID-19 pandemic crisis?

The present study supplements school principals' job crafting research (Toyama *et al.*, 2023) and is the first to examine job crafting using latent profile analysis (LPA) among school principals during the prolonged pandemic. Earlier person-oriented studies of rehabilitation workers and municipality leaders have revealed different profile solutions between studies by representing different activity levels and different job crafting orientations (Bruning and Campion, 2022; Mäkikangas, 2018; Mäkikangas and Schaufeli, 2021). The prolonged COVID-19 pandemic caused multiple constraints for school principals' work, which may have led principals to engage more in avoidance-oriented job crafting strategies than approach-oriented crafting strategies (Bruning and Campion, 2018). Based on previous literature, we expected to find 2–4 latent profiles, of which at least one would represent active avoidance-oriented job crafting.

RQ2. Do principals' job crafting profiles differ regarding their own perceived servant leadership?

Servant leadership characteristics, such as a humble attitude to learn, willingness to admit mistakes (van Dierendonck and Nuijten, 2011), strong psychological resources (Eva *et al.*, 2019) and high cognitive competence (van Dierendonck, 2011) reflect innovative work behavior (Khan *et al.*, 2021; Panaccio *et al.*, 2015b). Therefore, it is plausible to expect that approach-oriented job crafting profile is related to high servant leadership behavior (Lichtenthaler and Fischbach, 2018).

RQ3. Do principals' job crafting profiles differ regarding their stress concerning school administration and well-being?

Recent research describes how the COVID-19 pandemic disrupted school order and leadership but at the same time brought along a new normal, which might re-model education (Harris, 2020). As the pandemic continued, it is possible that principals crafted new skills or

new ways to adapt in their jobs in order to reduce stress (Upadyaya *et al.*, 2021). We expected school principals employing actively all job crafting strategies to report lower levels of stress.

RQ4. Do principals' job crafting profiles differ regarding work meaningfulness?

In the year 2021, principals faced heavy work overload as they had more to do than they had time to do it (Upadyaya *et al.*, 2021). In this kind of prolonged and exhausting situation, individuals may question the meaning of work (Harju and Hakanen, 2016). Work meaningfulness may be increased by job crafting (Wrześniewski and Dutton, 2001; Montani *et al.*, 2020) and therefore we expected school principals employing more proactive approach-oriented job crafting strategies to report higher work meaningfulness than principals who utilized more avoidance-oriented job crafting strategies.

Materials and methods
Context and selection of the participants
In this study, we investigate principals' work in 2021. Data collecting was done during April and May 2021 when schools were mainly back in classroom teaching, but they still had strict regulations and, for example, all the COVID-19 exposed students were traced together with health authorities. The healthcare sector did not have resources for tracing the COVID-19 exposed in Finland, and it became a new task for school principals. The participants were recruited in collaboration with the Finnish School Principals' Association. Participating candidates received an email introduction to the research. The introduction included the main purpose of the study and explained voluntary participation. The study was conducted according to Finnish Advisory Board on Research Integrity guidelines.

Participants
The study is part of longitudinal Principal Barometer, which is conducted annually and partially aligns with the international study of school principals' health and well-being (principalhealth.org). Of the 1,400 Finnish school principals who were contacted, the study participants were 459 respondents in the year 2021 (response rate 33%). Participants were asked by multiple-choice questions what their current job description was and if they worked as a principal on a full-time or part-time basis. Of all the participants, 64% reported to be administrative principals without teaching duties, 14% reported to be principals with teaching duties and 22% did not report their principal status. Of the principals, 47% reported to be women and 33% reported to be men, whereas 20% of the participants did not report their gender. The participants are a representative sample of Finnish principals (Finnish National Agency for Education, 2020a, b).

Measurements
Job crafting. We used a job crafting scale based on Tims *et al.* (2012). We utilized this scale to measure the four job crafting strategies by using a scale from 1 (*never*) to 5 (*very often*). We measured increasing structural job resources with five items in the questionnaire, such as "I try to learn new things at work." Cronbach's alpha for this strategy was 0.74. The strategy of increasing social job resources was measured with five items in the questionnaire, such as "I ask others for feedback on my job performance." Cronbach's alpha for this strategy was 0.53. The strategy of increasing challenging job demands had five items in the questionnaire, such as "I offer myself proactively to be part of interesting projects." Cronbach's alpha was 0.72. The strategy of decreasing hindering job demands had six items, such as "I make sure that my job is mentally less intense." Cronbach's alpha was 0.74. Strategies of increasing structural job resources, increasing social job resources and increasing challenging job

demands formed the approach-oriented job crafting scale. The strategy of decreasing hindrance job demands solely formed the avoidance-oriented job crafting scale. Job crafting scale is part of the longitudinal international study of school principals' health and well-being.

Servant leadership. Servant leadership scale was developed from original scale validation research (van Dierendonck and Nuijten, 2011) and developed specifically for the Finnish Principal Barometer. We utilized this scale to measure eight dimensions of servant leadership on a scale from 1 (*totally disagree*) to 5 (*totally agree*). The scale consisted of following dimensions; empowerment, accountability, standing back, humility, authenticity, courage, interpersonal acceptance and stewardship. We measured all dimensions with one item and reverse coded one item "I constantly criticize teachers for the mistakes they have made" according to original scale validation (van Dierendonck and Nuijten, 2011). Cronbach's alpha for this scale was 0.69.

Administrational COVID-19 stress. Principals' administrational stress scale was developed specifically for the Finnish Principal Barometer. We measured stress with four questions (adapted from Upadyaya *et al.*, 2021) concerning principals' administrational work, such as making sure that the school is organized according to regulations. Questions were timely and closely related to COVID-19 crisis and we asked how stressed and concerned principals had been in the last three months regarding: (1) "the COVID-19 crisis," (2) "changing instructions regarding the school during the COVID-19 pandemic," (3) "challenges in monitoring compliance with the instructions related to the COVID-19 pandemic," and (4) "implementation of a COVID-19 exit strategy"). Questions were answered using 0 (*a minor source of stress*) to 10 (*a significant source of stress*). Cronbach's alpha was 0.86.

Stress concerning well-being. The measurement scale of principals' stress concerning well-being was developed specifically for the Finnish Principal Barometer. It measured stress with four questions (adapted from Dicke *et al.*, 2018; Upadyaya *et al.*, 2021) concerning stress regarding students', teachers', parents' and principals' own emotional, social and mental well-being, as student- and parent-related issues have shown to correlate with principals' emotionally demanding stressors (Dicke *et al.*, 2018). Questions were timely related to prolonged COVID-19 crisis and we asked how stressed principals had been about school community's well-being in the last three months regarding: (1) "students' well-being," (2) "teachers' well-being," (3) "parents'/guardians' well-being," and (4) "your own well-being". Questions were answered using 0 (*a minor source of stress*) to 10 (*a significant source of stress*). Cronbach's alpha was 0.78.

Meaningful work. Principals' work meaningfulness was measured with three items from COPSOQ II, work organization and job contents (Pejtersen *et al.*, 2010). Copenhagen Psychosocial Questionnaire (COPSOQ) has been used for assessing the psychosocial work environment at workplaces in several studies since year 2000 (Pejtersen *et al.*, 2010). Items concerned meaningfulness that principals reported in their work: (1) "Is your work meaningful?" (2) "Do you feel that your work is important?" and (3) "Do you feel motivated and participated?" Questions were answered using 1 (*to a very small extent*) to 5 (*to a very large extent*). Cronbach's alpha for these items was 0.85, which is higher than in earlier scale validation (α 0.74) (Pejtersen *et al.*, 2010). The scale of work meaningfulness is part of the longitudinal international study of school principals' health and well-being.

Data analyses. To be able to identify school principals' job crafting profiles during the prolonged COVID-19 pandemic, we conducted the LPA (Hofmans *et al.*, 2020). In LPA the covariance structure of the job crafting strategies is explained via differences in their mean values between the profiles. LPA is model-based analysis, which means that different models are analyzed in terms of their statistical goodness and theoretical fit, before finally determining the number of profiles (Muthén and Muthén, 2018). Using Mplus version 8 we carried out a series of LPAs using the mean scores of the job crafting scales. We used the Bayesian Information Criterion (BIC), Adjusted Bayesian Information Criterion and Akaike Information Criterion (AIC), according to which the model with the smallest value is

considered the best model. The estimation method of maximum likelihood ratio test (LMR) and Vuong-Lo-Mendell-Rubin likelihood ratio test (VLMR) were used for comparing the best-fitting model. Furthermore, the classification quality (i.e. entropy value), p-value and group sizes were used in deciding the final solution for job crafting profiles.

We examined whether and how job crafting profiles differed in terms of servant leadership, stress and work meaningfulness. To test these differences, we used the auxiliary measurement-error-weighted-method (BCH), which evaluates the mean scores across profiles for continuous auxiliary variables by using a Wald chi-square test (Asparouhov and Muthén, 2021).

Results

Descriptive statistics

Table 1 shows that on variable level overall job crafting was positively related to servant leadership, stress concerning well-being, work meaningfulness and both approach- and avoidance-oriented job crafting. Approach-oriented job crafting was positively related to servant leadership and work meaningfulness. Avoidance-oriented job crafting negatively correlated with servant leadership, work meaningfulness and approach-oriented job crafting.

Latent profile analysis

Exploring principals' job crafting profiles by using LPA showed that Bayesian information criterion (BIC) began to decrease when additional latent classes were in a two-class solution. BIC continued to decrease with multiple class solutions, but the p-value for LMR (Lo-Mendell-Rubin Test) was no longer acceptable except in a four-class profile solution. Differences in indices between two-class and four-class profile solutions were that the four-class solution included one very small profile (3.5%). A minor profile less than 5% might have decreased the interpretation of the results. Therefore, the two-class solution was chosen as the final latent pattern solution. Table 2 presents the fit indices for the models with different numbers of latent profile patterns.

Regarding the first research question, two job crafting profiles could be identified among school principals (Table 2). Table 3 shows that both job crafting profiles consisted of all job crafting strategies and the order of preference for using different strategies was the same in both profiles. The result which differentiated principals into two job crafting profiles were the values in three approach-oriented job crafting strategies (increasing job resources and job demands) (Zhang and Parker, 2019). Decreasing hindering job demands did not differentiate the two profiles. The first profile was larger (55%), and it was named *active crafters*. The second profile consisted of principals who reported approach-oriented strategies less than active crafters. The profile was named *average crafters* (45%).

Job crafting profiles in relation to servant leadership, stress and work meaningfulness

Regarding the other research questions, Table 4 shows that principals who reported high servant leadership, high stress concerning well-being and high work meaningfulness more often belonged to active crafters than to average crafters. The level of administrational stress was relatively high in both profiles, but there was no significant difference between profiles.

Discussion

Job crafting profiles among principals

The first research question was about what kind job crafting profiles can be found among school principals during the prolonged COVID-19 pandemic. Two profiles were identified:

Variable	1	2	3	4	5	6	M	S.D.	Scale
1. Servant leadership							4.3	0.38	1–5
2. Adm. COVID-19 stress	−0.077						6.8	2.06	1–10
3. Stress concerning well-being	0.018	0.572**					6.0	1.91	1–10
4. Work meaningfulness	0.406**	−0.068	−0.167**				4.3	0.59	1–5
5. Approach-oriented job crafting	0.320*	0.068	0.098	0.331**			3.1	0.44	1–5
6. Avoidance-oriented job crafting	−0.228**	0.040	0.083	−0.151**	−0.148**		2.0	0.48	1–5
7. Overall job crafting	0.217**	0.082	0.128*	0.223**	0.912**	0.217**	2.8	0.33	1–5

Note(s): **Correlation is significant at 0.01 level. *Correlation is significant at 0.05 level

Source(s): Authors' work

Model	Log-Lh	FP	AIC	BIC	ABIC	Entropy	LMR	Group sizes
One pattern	−1,628.405	8	3,272.810	3,305.843	3,280.453			459
Two patterns	−1,528.628	13	3,083.255	3,136.933	3,095.675	0.627	0.000	254,205
Three patterns	−1,491.737	18	3,019.474	3,093.797	3,036.670	0.722	0.187	290,115,54
Four patterns	−1,471.392	23	2,988.785	3,083.753	3,010.758	0.823	0.002	16,234,113,96
Five patterns	−1,461.556	28	2,979.113	3,094.726	3,005.862	0.797	0.284	16,236,109,39,59
Six patterns	−1,451.639	33	2,969.277	3,105.536	3,000.804	0.745	0.062	137,115,97,16,39,55
Seven patterns	−1,444.552	38	2,965.104	3,122.008	3,001.407	0.785	0.702	5,127,135,72,96,8,16

Note(s): Log-LH, log-likelihood; FP, Free Parameters; AIC, Akaike Information Criteria; BIC, Bayes Information Criteria; ABIC, Adjusted Bayes Information Criteria; LMR, Lo-Mendell-Rubin
Source(s): Authors' work

Table 2.
Fit indices for the compared latent pattern job crafting models

Profile	Active crafters (N = 254, 55%)			Average crafters (N = 205, 45%)			Overall M
	N	M	S.E.	N	M	S.E.	
Increasing structural job resources	254	4.2	0.06	205	3.3	0.08	3.8
Increasing social job resources	254	2.7	0.04	205	2.4	0.06	2.6
Increasing challenging job demands	254	3.4	0.08	205	2.6	0.07	3.1
Decreasing hindering job demands	254	1.9	0.04	205	2.1	0.04	2.0

Note(s): Scale 1–5 in job crafting
Source(s): Authors' work

Table 3.
Means and standard errors of job crafting profiles among school principals (N = 459)

Variable	Active crafters M (S.E)	Average crafters M (S.E)	Wald's X^2/p-value	Profile differences
Servant leadership	4.615 (0.043)	4.278 (0.036)	29.18/0.000	1 > 2***
Administrical COVID-19 stress (1)	6.736 (0.128)	6.470 (0.149)	1.43/0.227	1 > 2
Stress concerning well-being (2)	6.290 (0.144)	5.713 (0.182)	4.96/0.026	1 > 2*
Meaningful work	4.478 (0.042)	4.076 (0.060)	24.75/0.000	1 > 2***

Note(s): BCH analysis in MPlus. Scale 1–5 in servant leadership and meaningful work. Scale 1–10 in COVID-19-related stress 1 and 2
*$p < 0.05$
***$p < 0.001$
Source(s): Authors' work

Table 4.
Differences between job crafting profiles

active crafters (55%) and average crafters (45%). The findings showing a large active crafter profile is not consistent with earlier research among managers as they have reported mostly settling with their existing opportunities because of their own inner challenges to apply job

crafting (Berg *et al.*, 2010). Managers have reported facing high tension between job expectations and realities (Berg *et al.*, 2010; Pollock *et al.*, 2015). It is possible that even in crisis, the organizational culture, better boundaries and professional autonomy allow Finnish principals to craft their jobs more often than other managers. Both profiles included four job crafting strategies, namely increasing structural job resources, increasing social job resources, increasing challenging job demands and decreasing hindering job demands. Approach-oriented job crafting strategies were reported more than avoidance-oriented job crafting strategies in both profiles.

Active crafters reported most frequently using increasing structural job resources, then increasing challenging job demands, then increasing social job resources and lastly decreasing hindering job demands. Actively increasing structural job resources is in line with variable-oriented research among principals (Toyama *et al.*, 2022). We may reflect on these findings through the conservation of resources (COR) theory (Hobfoll, 1989), which suggests that individuals try to maintain and grow resources that are important or valuable to them. According to COR theory, we suggest that principals in the active crafter profile were already well resourced due to their earlier efforts; therefore, they were able to invest even more in their resources via job crafting (Hobfoll, 2011). The second-most frequent strategy among active crafters was increasing challenging job demands. This finding was unexpected because demanding circumstances during the COVID-19 pandemic had already depleted principals' resources by increasing their burnout (Lavonen and Salmela-Aro, 2022), and furthermore, COR theory suggests that in high workload individuals typically choose to decrease their job demands instead of increasing their challenging job demands (Hobfoll, 1989).

It may be that active crafters were professionally more experienced and therefore able to optimize their autonomy to increase their challenging job demands (Roczniewska and Puchalska-Kamińska, 2017) and reinterpret COVID-19 job demands as new challenging job demands (Hobfoll, 1989). It is also possible that active crafters had such an approach of learning and adaptive thinking, which enabled their job crafting in workplace (Nissinen *et al.*, 2023). Also, resources from other life domains may have benefitted active crafters (Demerouti and Bakker, 2022), and therefore, it is possible that active crafters had resources of resilience and courage to try new approaches and job crafting, even when they weren't sure whether it would work (McLeod and Dulsky, 2021).

Average crafters reported the most frequently using increasing structural job resources, then second increasing challenging job demands, then third increasing social job resources and lastly decreasing hindering job demands. However, average crafters' low levels in all approach-oriented job crafting strategies indicate that principals in this profile did not craft their work frequently. Instead, they may have used more familiar strategies in managing their work.

A moderate level in increasing structural job resources and a modest level in increasing challenging job demands may reflect that average crafters were not frequently pivoting to their work priorities, time scheduling or managing via job crafting (Pollock, 2020). It may also be that the overall circumstances: demanding crisis conditions, local restrictions and specific school context (e.g. the number of quarantines in school), which all may have affected average crafters by impeding them from increasing their job resources and challenging job demands (Liao *et al.*, 2021). In principals' daily work, these demands may have caused shortages, for example, in job autonomy, time scheduling and in competence developing opportunities. It is possible that principals in the average crafter profile also experienced a lack of psychological resources during prolonged crisis (Eva *et al.*, 2019) and therefore had fewer opportunities to seek and grow their resources (Hobfoll, 2002) via increasing job resources and job demands (Cenciotti *et al.*, 2017).

The principals in both profiles reported relatively modest crafting by increasing their social job resources. This finding is in line with principals reporting challenges in keeping

contact with members of the school personnel during COVID-19 (Ahtiainen *et al.*, 2022). This finding may also imply to experiences of social isolation or that principals' social resources were mainly harnessed to crisis leadership and to community adaptation during the crisis (Ahtiainen *et al.*, 2022; Upadyaya *et al.*, 2021). Further, it is possible that because of strict social restrictions ("keep the distance"), the majority of principals had no ordinary networking, feedback discussions, or collaboration and therefore had few opportunities for increasing their social job resources.

The least used strategy in both profiles was decreasing hindering job demands. Relatively low avoidance-oriented crafting did not differentiate the two job crafting profiles and this finding may reflect the fact that one major task of school principals is to solve difficult situations in the school community. Instead of hindering their own participation in such situations, school principals serve as facilitators in challenging situations. This finding also suggests that job crafting may exist differently in different occupations. Therefore, different occupational groups would be important to be considered in theory and instrument development.

Job crafting profiles according to servant leadership, stress and work meaningfulness
The second research question examined whether job crafting profiles differed regarding principals' own perceived servant leadership. Expectedly, active job crafting manifested high servant leadership. These findings suggest that active crafters manifested strong psychological maturity (Eva *et al.*, 2019) and high cognitive complexity (van Dierendonck, 2011). They probably had energy to craft their jobs, because servant leaders' perspective-taking competence (understanding other peoples' preferences, values, or needs) is replenishing and restorative for leaders themselves (Liao *et al.*, 2021). This finding is consistent with earlier research among employees and contributes to the research field by revealing similar associations among Finnish school principals (Bavik *et al.*, 2017; Khan *et al.*, 2021; Yang *et al.*, 2017). Another possible explanation is that principals were concerned about multiple stakeholders' well-being and ability to cope (McLeod and Dulsky, 2021; Upadyaya *et al.*, 2021) and prevailing crisis conditions together with active crafters' professional characteristics may have matched with servant leaderships' core of prioritizing others' well-being and growth (van Dierendonck, 2011). High servant leadership may also reflect on active crafters' strong commitment to dealing with occurring demands (Kool and van Dierendonck, 2012) and servant leaders' effectiveness in terms of a crisis (van Dierendonck *et al.*, 2014). Active crafters reporting increased challenging job demands is also in line with servant leaders engaging with challenging tasks (van Dierendonck, 2011).

Average crafters reported significantly lower servant leadership than active crafters, although the level of servant leadership among average crafters was not low. It may be that the low level of increasing social job resources among average crafters reciprocally related with their lower servant leadership behavior, as servant leadership relies on promoting prosocial behavior (Chen *et al.*, 2015), such as persuasion discussion (van Dierendonck, 2011). It is possible that average crafters' working context (i.e. their school communities) did not maintain such feedback culture or social support (Tims *et al.*, 2021), or had suffered from several quarantines and was therefore even more strictly instructed to social distance during the COVID-19 pandemic. This finding is noteworthy for the future, because social support from the school community, along with daily resilience, has shown to be beneficial in protecting principals against high stress (Upadyaya *et al.*, 2021). Even though crisis in the future may demand social distancing, there should be alternative practices and tools for daily social interaction.

Although servant leadership replenishes principals, there may be a risk of increasing depletion (Liao *et al.*, 2021) if leaders face too many conflicts or role overload (Xu *et al.*, 2020).

For instance, school principals serve multiple stakeholders every day (e.g. students, parents, teachers, administration and the third sector) and often these stakeholders require principals' attention simultaneously (Maxwell and Riley, 2017). This may lead servant leadership-oriented principals to experience role overload if time, energy, physical, or psychological resources are insufficient to meet all the demands from multiple stakeholders (Panaccio *et al.*, 2015a). This may be the situation especially in a prolonged or consecutive crisis that depletes school principals' psychological resources even further.

The third research question addressed job crafting profile differences regarding principals' stress. COVID-19 was the context where stress occurred and therefore it is not possible to disassociate stress results from COVID-19 pandemic. Unexpectedly, active crafters reported higher COVID-19 related administrational stress and stress concerning well-being than average crafters, although only stress concerning well-being significantly differed between profiles. Average crafters' lower stress may manifest their modest job crafting in increasing structural job resources and challenging job demands and implies that they were not over pressuring themselves in work (Clark *et al.*, 2016), whereas active crafters' high stress may manifest as working excessively (Gillet *et al.*, 2022).

It is possible that an increase in stress concerning well-being reflected active crafters' strong concern about the school community's well-being (McLeod and Dulsky, 2021; Upadyaya *et al.*, 2021), as they simultaneously utilized active job crafting to maintain their own well-being and perhaps to show an example to teachers. It may also be that active crafters faced more demands than average crafters from other aspects of their life, and it influenced their stressors concerning well-being (Demerouti and Bakker, 2022). The active crafter profile has similarities with earlier findings among Finnish teachers, who were engaged and committed to their work but experienced more exhaustion (Salmela-Aro *et al.*, 2019). The active crafter profile findings are also supported by a recent case study that showed principals in Finland and Estonia not giving up on teachers or students who have difficulties. Instead, principals provide constructive feedback to people in need of it (Tirri *et al.*, 2021).

The fourth research question was about profile differences regarding work meaningfulness. Work meaningfulness among active crafters was significantly higher than among average crafters. It is possible that active crafters providing high servant leadership may have gained themselves a greater sense of purpose during the crisis (Panaccio *et al.*, 2015a). Active crafters reporting also high increasing structural job resources may reflect on their high job autonomy and task significance, which have shown to lead to meaningfulness in work (Rosso *et al.*, 2010). Average crafters experiencing work meaningfulness was significantly lower than among active crafters. This finding may imply that social support (Britt *et al.*, 2021) among average crafters' supervisors, teachers or parents was not reciprocal as they self-reported modest strategy use in increasing their social job resources. Other people valuing or devaluing one's work has an impact on the meaning that employees make of their jobs, roles and selves in the organization (Wrześniewski *et al.*, 2003). We suggest rethinking the importance of feedback culture in workplace and enhance supervisors' feedback in daily interaction, because it has a greater effect on employees' work meaningfulness than feedback given by coworkers (Montani *et al.*, 2020).

Study limitations and future research suggestions
The present study has limitations that should be considered when generalizing the findings. First, even though the prolonged COVID-19 pandemic decreased school principals' professional autonomy in Finland, they typically have considerably high autonomy in their work, which may limit the generalizability of study findings in other educational or organizational systems. Second, most of the participating principals did not have teaching

duties (i.e. they were full-time administrative principals). In Finland, only the largest schools' principals do not teach regularly and most schools have a principal who is also teaching alongside managing the school. The amount of teaching depends on the school size (e.g. a principal for a 400-student primary school may teach 9–11 lessons per week). Therefore, the work of full-time principals may differ from the work of principals who have weekly teaching duties. Nevertheless, all principals have undivided responsibility all the time, regardless of their principal status. It is possible that during a heavy workload in the prolonged COVID-19 pandemic the principals with teaching duties did not have time to answer the online survey. Therefore, we acknowledge that the sample may be biased to present the principals' situations in larger schools. Third, it is possible that occasional and unpredictable distance learning periods during data collection 2021 may have biased principals' reporting increasing social job resources. More studies would be needed in the future to examine the extent of increasing social job resources. Fourth, we were not able to investigate the data from the longitudinal perspective, as the sample size for longitudinal data was too small. Therefore, it prevents us from drawing conclusions regarding causality whether the profiles remain unchanged after crisis or if the job crafting behavior produced servant leadership, stress, work meaningful or vice-versa. Fifth, slightly lower alpha values for job crafting strategy of increasing social job resources and servant leadership might have occurred because scale items measured social job crafting and servant leadership from many different perspectives; heterogeneous constructs may have lower alpha. The job crafting strategy of social job resources is reported to be the lowest within job crafting strategies in the validation of the scale (Tims *et al.*, 2012) and also in previous studies (see, e.g. Toyama *et al.*, 2023; Mäkikangas and Schaufeli, 2021). However, these lower values of internal consistency may be seen as a limitation of this study.

Future longitudinal research of job crafting and servant leadership and the intrapersonal effects would draw conclusions about causality and long-term outcomes, as more research is needed about servant leadership affecting the leaders themselves (Panaccio *et al.*, 2015a). To develop leadership practices, it would be important to investigate the support that active job crafters and servant leaders get in their organizations. In the present study they expressed stress concerning well-being, which may imply that those who care may be very concerned and therefore experience stress.

Conclusions and implications

A lesson learned from the COVID-19 crisis in education is the importance of individual and organizational regulatory strategies to manage changing job demands and job resources (Demerouti and Bakker, 2022; Nissinen *et al.*, 2023). This study contributes to scholars and practice by empirical research on how job crafting profiles differ regarding servant leadership, stress and work meaningfulness. This study provides new knowledge about school principals' job crafting profiles during the prolonged crisis, contributes to the existing literature within the scholarship of job crafting and expands the integrative view of various elements of principals' educational leadership (Striepe and Cunningham, 2021). In this study we investigated principals' stress concerning well-being from concern-perspective, whereas earlier studies among school principals have investigated, e.g. parent- and teacher-related stressors more from demands they set for principals (Friedman, 2002; Maxwell and Riley, 2017). These study findings also contribute to wider leadership research in complex organizations as principals represent managers in educational organizations.

The study showed that principals' job crafting profiles differed in terms of how actively different job crafting strategies were used. In practice, principals should learn to pay attention to job demands they face and to detect job resources they have or gain, as they would benefit from being able to decrease their job demands by buffering them with

approach-oriented job crafting strategies. Principals' work is constantly changing and they need job crafting training to actively craft their work and to become lead learners of their personnel. They should be encouraged to implement various job crafting strategies because job characteristics in certain contexts may affect what resource combinations have buffering impacts on work demands and further to stress (Bakker *et al.*, 2007). Job demands will also be less straining when there are more resources available (Demerouti and Bakker, 2022) and work meaningfulness may increase via job crafting (Wrześniewski and Dutton, 2001).

Educational organizations should allow principals to utilize their autonomy by increasing their structural job resources, e.g. how to run daily school processes, implement curriculum objectives or practices and lead the learning community. Schools are different from each other and principals know what kinds of structures and strategies fit well with each unit. Principals' supervisors can support and increase principals' social resources in the future by creating an atmosphere of constructive feedback, encouraging principals to participate in professional networks, allocating time for principals' professional discussions, sharing difficult issues and mentoring them to pay more attention to increasing their social job resources. Decreasing hindrance job demands may be noted as optimizing strategy to balance job demands and resources (Nissinen *et al.*, 2022), but also as a strategy, which might motivate school principals to begin job crafting.

Principals act as sense-giving leaders during crises (Demerouti and Bakker, 2022) and to minimize their risk of exhaustion and role overload, organizations should support leadership with adequate resources. Organizations should enhance servant leadership through a supportive culture and by developing the perspective-taking competence across the organization. This may enable principals to replenish their self-controlling resources (Liao *et al.*, 2021), predict their readiness to deal with crisis (Al-Asfour *et al.*, 2022) and increase organizational performance by returning on investments (Peterson *et al.*, 2012). We suggest utilizing these study findings when developing educational leadership, the work and competence of principals or developing organizational behavior in other complex systems.

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Further reading

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Supplementary Material

The supplementary material for this article can be found online.

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