

Staying healthy during COVID-19 crisis: well-being and salutogenic crafting among German and Swiss working population

Rebecca Brauchli , Philipp Kerksieck*, Martin Tušl , and Georg F. Bauer 

Center of Salutogenesis, Epidemiology, Biostatistics and Prevention Institute, University of Zurich, Hirschengraben 84, Zurich 8001, Switzerland

*Corresponding author. E-mail: philipp.kerksieck@uzh.ch

Summary

The COVID-19 pandemic induced considerable changes regarding our working and private lives. This study aimed to examine the psychosocial effects of the COVID-19 crisis on German and Swiss employees. We analyzed the impact of the crisis on working and private life, well-being and health indicators. We tried to understand how the salutogenic behavior of crafting helps to overcome adversities during the COVID-19 pandemic and to maintain well-being and health. Therefore, we conducted a follow-up online survey from 9 to 22 April 2020 among 597 employees that had participated in the first wave of the survey in June 2019. This follow-up study design offered the opportunity to compare the situation of survey participants before and after the COVID-19 outbreak. This pre–post comparison was possible through the design of our study, which allowed us to link participants in an individual, yet anonymized way from t0 to t1. Results of the study showed that the situation concerning psychosocial factors at work and in private life and several well-being and health indicators was stable or even improved. Many study variables even remarkably improved among high crafters—a group of employees who tend to regularly craft their job and private life. Our findings indicate that employees are coping with the crisis surprisingly well. Moreover, there seem to exist beneficial, salutogenic behaviors (i.e. crafting) that allow people to better cope with crises such as the COVID-19 pandemic. These behaviors should be induced and promoted by interventions as they could be especially beneficial for low crafters.

Key words: COVID-19 pandemic, psychosocial factors, salutogenesis, job crafting, off-job crafting

INTRODUCTION

The COVID-19 pandemic has had a variety of effects on physical health, health care, economic situation and also on psychosocial factors (Rudolph *et al.*, 2020). These consequences were particularly severe as the pandemic suddenly confronted the working population with new challenges. These challenges were specific and depend on the particular group to which a person belongs: E.g.

those in the working population who worked from home may have experienced an increase in the density of their working and private lives and difficulties in maintaining their well-being and a healthy work-life balance (van Bavel *et al.*, 2020). Others were affected by short-time work or loss of their jobs, which meant that an important part of their life and their identity was lost (Eurofound, 2020; ILO, 2020). Consequently, the crisis

demanded high adjustment efforts from employees and put especially the disadvantaged population groups at a high risk of deep personal crises. This might have far-reaching negative health consequences. First explorative studies on the impact of the COVID-19 crisis reported mixed results (Kniffin *et al.*, 2020; Prime *et al.*, 2020): Eurofound (2020) recently published findings of their EU-wide survey on living, working and COVID-19. Accordingly, the 85 000 respondents reported high levels of loneliness, low levels of optimism, insecurity regarding their jobs and financial future. Respondents reported an increase in telework, 24% working from home for the first time. This might have a negative impact on parents with children at home, especially for those with school-aged children, as this group had additional parenting and home-schooling duties causing difficulties concentrating on work. On the other hand, looking beyond the negative impact of the COVID-19 crisis, it also can be seen as an opportunity to learn how to cope with such a profound change and even to develop and enact new, pro-active behaviors (crafting, see below). Thus, our study aimed to systematically examine the effects of the COVID-19 crisis on employees' work and home situation as well as their well-being with a within-person pre-post comparison. We further assessed the behavior of crafting on and off the job to maintain mental well-being.

Relevance of demands and resources for well-being and health

To understand the interplay of psychosocial working conditions and well-being/health, the Job Demands-Resources Theory is a suitable framework (Bakker and Demerouti, 2017). First, job characteristics can be classified into two categories: *job demands* (negative physical, mental, social, or organizational job characteristics such as time pressure or poorly defined roles) and *job resources* (positive physical, mental, social or organizational job characteristics such as a job autonomy or social support at work) (Bakker and Demerouti, 2007). Second, two psychological processes are described that explain how job characteristics affect well-being and health (Demerouti *et al.*, 2001): (i) The health impairment process explains the exhausting impact of job demands that consequently decrease well-being and health. (ii) The motivational process suggests that job resources exert a motivating potential and, thus, lead to an increase of well-being and health (Bakker and Demerouti, 2017). We expect the COVID-19 crisis to have an impact on job demands and resources and, thus, on employee well-being and health as well.

Analogous to the Job-Demands Resources framework (Bakker and Demerouti, 2017), also home demands and home resources have been suggested to have a detrimental and motivational effect, respectively (Demerouti *et al.*, 2012). Specifically, home demands that require much effort (e.g. many home obligations) are associated with reduced well-being and health. Home resources (e.g. social support at home) enable individuals to deal with the demanding aspects at home and are associated with positive effects. We expect that due to COVID-19, employees face not only huge changes in working life but also their demands and resources in private life will have changed (Prime *et al.*, 2020). Finally, since the COVID-19 related changes to work and private life emerged, we assume that it is more difficult to balance work and private life, leading to increased work-home conflicts in the face of the crisis.

Sense of coherence and crisis

Sense of Coherence is defined as 'a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (i) the stimuli, deriving from one's internal and external environments in the course of living are structured, predictable and explicable [comprehensibility]; (ii) the resources are available to one to meet the demands posed by these stimuli [manageability]; and (iii) these demands are challenges, worthy of investment and engagement [meaningfulness]' (Antonovsky, 1987, p. 19). Sense of Coherence (SoC) is a key personal resource in the salutogenic model (Antonovsky, 1979, 1987). Numerous studies have shown that this global orientation to life as being comprehensible, manageable, and meaningful is consistently associated with (mental) health outcomes (Eriksson, 2017). Furthermore, coherent living conditions will enhance the SoC, whereas a crisis such as COVID-19 could reduce SoC at least in the short term.

Job crafting and off-job crafting

Salutogenic behaviors have been identified as relevant for mental health and wellbeing (Langeland and Vinje, 2013). Even outside of crises in an ever faster changing environment, a high degree of adaptability is required. Nowadays, people are actively shaping their situation and striving for improvement (Rudolph *et al.*, 2017) rather than reacting passively to the forces of the situation. Such pro-active behavior in various life domains is referred to as 'crafting' (de Bloom *et al.*, 2020). In working life, employees can (pro)actively adjust their work environment through job crafting (Tims *et al.*, 2012)

with the (implicit) aim of aligning it with their preferences, motives, and passions to create meaning and make their lives more coherent (Wrzesniewski and Dutton 2001). Employees craft their job by increasing their structural and social resources at work, actively seeking challenges, and reducing demands (Tims and Bakker, 2010). It is a bottom-up approach that can be applied in any kind of job or hierarchical position and without managerial or organizational consent. Still, people in higher positions and with more job autonomy show crafting behaviors more frequently.

People do not only craft their work domain. Several studies have examined crafting in the non-work domain and its beneficial nature (c.f. de Bloom *et al.*, 2020). Off-job crafting subsumes a series of activities people show to increase their well-being by shaping and crafting their non-work domain along six dimensions: (i) People actively detach from work by organizing their leisure time to distance themselves from work (detachment). (ii) They plan their off-job time so that they can reduce stress and relax (relaxation). (iii) They make sure that they experience autonomy and control within their off-job domain (autonomy). (iv) They seek activities that are challenging and broaden their horizon (mastery). (v) They make sure that they feel meaning outside work (meaningfulness), and (vi) they shape their leisure time so that they are surrounded with people they love (affiliation) (Kujanpää *et al.*, 2020).

In everyday life, these activities result in a considerable boost of resources, of meaning, and well-being that contributes to what is termed a salutogenic life. We expect these salutogenic behaviors to be protective during crises such as the current pandemic.

Research question and hypotheses

Following our study aim of examining the psychosocial effects of the COVID-19 crisis on the working population, we address the two research questions: First, how did the mean levels of the study concepts job/home demands and resources, work-home conflicts, sense of coherence, and other concepts related to health and well-being, have changed after the COVID-19 outbreak? Considering the previously found mixed psychosocial impact of the COVID-19 crisis, we address this first research question in an exploratory way without formulating a hypothesis. Second, what influence has crafting had during this crisis? Therefore, we compare a group of employees who exert crafting (high job crafters/high off-job crafters) with a group who rather do not craft (low job crafters/low off-job crafters) and formulate two hypotheses:

Hypothesis 1: High job crafters compared to low job crafters experience better psychosocial conditions and well-being/health: i.e. the difference between t1 and t2 (before/after COVID-19 outbreak) is more beneficial in this group.

Hypothesis 2: High off-job crafters compared to low off-job crafters experience better psychosocial conditions and well-being/health: i.e. the difference between t1 and t2 (before/after COVID-19 outbreak) is more beneficial in this group.

High and low job and off-job crafters were the upper 20 percent and the lower 20 percent, respectively.

METHOD

Participants and procedure

The present study was conducted with follow-up data with 2 waves of measurement and 9-month time intervals (wave 1: 13 June–9 July 2019/wave 2: 9–22 April 2020). Participants from Germany (86.3%) and German-speaking Switzerland (13.7%) were recruited through a panel data service Respondi (respondi.com). They received a minimal incentive for their participation. Participation was voluntary, and the anonymity and confidentiality of the data was assured and emphasized.

The combined sample was $N=597$. We excluded participants who indicated that they worked less than 20 hours per week, who were self-employed or were not within the age range of 18–65 years. The mean age was 49.3 years, and there were slightly more males (54.3%) than females. 46.6% had completed an apprenticeship, and 29.6% had a higher education degree, such as college or university. 67.7% indicated to have no children whereas 28.3% reported to live alone—i.e. without family, partner or flat mates. The majority of participants were employees without any managerial or leadership responsibilities (71.2%). Owing to the pandemic, 26.5% of the employees reported a change in their working contract: 24.6% had their contracted working hours reduced (of which 8.4% to zero) while 0.8% lost their job; 45.2% of the sample worked (at least partly) from home. Overall, in terms of age, education and living situation (i.e. single households), the study sample seems to be a good representation of the target of the working population in Germany (www.destatis.de) and Switzerland (www.bfs.admin.ch).

Measures

Job demands: Quantitative demands were measured using the eight-item subscale of the health & safety

executive (HSE) management standards indicator tool (Cousins *et al.*, 2004). *Qualitative demands* were measured using a three-item subscale from the Salutogenic Subjective Work Analysis Questionnaire (SALSA) (Rimann and Udris, 1997). Participants were asked to reply to the items of both subscales on a five-point Likert-scale (1 = 'strongly disagree', 2 = 'disagree', 3 = 'somewhat agree', 4 = 'agree' and 5 = 'strongly agree').

Job resources were assessed also using the HSE management standards indicator tool (Cousins *et al.*, 2004): *job control* (six items), *role clarity at work* (five items), *peer support* (five items) and *manager support* (four items). Moreover, the job resource *developmental possibilities at work* were assessed using four items from SALSA. Participants were asked to rate the items with 1 = 'strongly disagree', 2 = 'disagree', 3 = 'somewhat agree', 4 = 'agree' or 5 = 'strongly agree'.

Home demands were measured with scales assessing time requirements (quantitative home demands), emotional demands and mental demands. To measure home demands, we asked participants with eight items ranging from 1 = 'never' to 5 = 'always' to rate their quantitative, emotional and cognitive home demands (Peeters *et al.*, 2005). The response categories ranged from 1 = 'never' to 5 = 'always'.

Home resources were assessed with the subscales of home autonomy, social support and developmental possibilities. The respective scale was developed and applied by Demerouti *et al.* (2010) and conceptually mirrors existing scales of job resources. Home autonomy and home social support were assessed with four items each, home developmental possibilities were assessed by three items. The response categories ranged from 1 = 'never' to 5 = 'always'.

Work-home conflicts were assessed using 12 items from the Dutch questionnaire Survey Work-home Interference Nijmegen (SWING; Geurts *et al.*, 2005). The answer categories for both home-work interference and facilitation ranged from 1 = 'never' to 4 = 'always'.

Sense of Coherence was assessed with the German version of the SOC-L9 scale (Schumacher *et al.*, 2000). Participants responded to the items on a seven-point Likert-scale. SOC-L9 contains items reflecting the three theoretical components of sense of coherence (comprehensibility, manageability and meaningfulness).

Burnout was assessed with the subdimension 'work burnout' from the Copenhagen Burnout Inventory (Kristensen *et al.*, 2005). They were rated on a five-point Likert-type scale ranging from 'always' to 'never/almost never'.

Job satisfaction was assessed with a single-item measure from the questionnaire of the Swiss Household

Panel. The question was assessed on an 11-point Likert-type scale extending from 0 'not satisfied at all' to 10 'very satisfied'.

The Warwick-Edinburgh Mental Well-Being Scale (WEMWBS) scale covers both hedonic and eudaimonic well-being within the last four weeks (Tennant *et al.*, 2007). We used the seven-item short version of the WEMWBS in the German translation (Lang and Bachinger, 2017). Questions had an answering format ranging from 1 = 'none of the time' to 5 = 'all of the time'.

General life satisfaction was assessed with a single item from the questionnaire of the Swiss Household Panel (Schweizer Haushalt-Panel, 2009). The question was assessed on an 11-point Likert-type scale extending from 0 'not satisfied at all' to 10 'very satisfied'.

Self-rated health was measured with one item, as well. The respondents were asked to rate their overall health status on a five-option scale from 1 = 'poor' to 5 = 'very good'.

Job crafting was assessed as follows: the dimensions of 'increasing structural job resources' and 'increasing social job resources' were measured by five items each from the scale by Tims and her colleagues (Tims *et al.*, 2012) and the dimension of 'seeking challenges' was measured with three items from the scale by Petrou *et al.* (2012). The items were scored on a five-point scale ranging from 1 'never' to 5 'very often'.

Off-job crafting was measured with the 18-item version of the scale to measure off-job crafting over the past month. The items were scored on a five-point scale ranging from 1 'never' to 5 'very often' (Kujanpää *et al.*, 2020).

Statistical analyses

To address the first research questions regarding differences concerning the work and private situation as well as well-being/health before and after the COVID-19 outbreak, we used paired t-tests using IBM SPSS Version 26. Effect sizes (Cohen's *d*) were calculated. Cohen classified the effect sizes as small ($d=0.2$), medium ($d=0.5$), and large ($d\geq 0.8$; Cohen, 1992). This measure including the rule of thumb defined by Cohen served us to estimate the results. On the one hand, the effect size is often cited as a better indicator of the robustness of an effect or difference. On the other hand, Cohen's *d* is not sensitive to sample size and therefore, based on this number, the different sized groups can be compared concerning their change. To compare high job and off-job crafters with the respective low crafters, we divided our sample into four subgroups and reran the

analyses: high (upper 20 percent of the total sample; $N=132$) and low (lower 20 percent; $N=141$) job crafters as well as high (upper 20 percent; $N=120$) and low off-job crafters (lower 20 percent; $N=112$). Moreover, to address our hypotheses we compared the situation at t1 (before outbreak of the pandemic) with the situation at t2 (after the outbreak of the pandemic).

RESULTS

Bivariate correlations of all study variables at t1 are shown in Table 1, at t2 in Table 2. Please note here the positive and statistically significant association between crafting and sense of coherence {job crafting * sense of coherence: $r = 0.189$ [$p \leq 0.01$ (two-tailed)] at t1 and $r = 0.190$ [$p \leq 0.01$ (two-tailed)] at t2/off-job crafting * sense of coherence: $r = 0.366$ [$p \leq 0.01$ (two-tailed)] at t1 and $r = 0.394$ [$p \leq 0.01$ (two-tailed)] at t2}.

The results displayed in Table 3 allow us, first, to describe the changes in the total sample in all study variables pre and post COVID-19 outbreak and therefore to address the first research question.

Overall, we observe that our participants seem to handle the crisis quite well (see Table 3). In tendency, employees report slightly improved working- and private life conditions after the COVID-19 outbreak compared to 9 months ago. In the whole sample, none of the indicator comparisons reached the critical threshold of 0.20 in effect size. In employees' job satisfaction we observe a highly significant increase [$p \leq 0.001$ (two-tailed)] when comparing the whole sample's values before and after the outbreak. However, the effect size is small with $d = 0.19$.

Second, with the results displayed in Table 4, we can test Hypothesis 1 and expect high job crafters to improve their working conditions and (especially work-related) well-being (mean comparisons t1–t2) compared to the subgroup of low job crafters.

When we look at the subgroup of high job crafters, we see that their professional and personal situation as well as their well-being/health significantly improved compared to the subgroup of low job crafters (and also compared to the whole sample). Therefore, Hypothesis 1 can be supported. Especially, their job resources—although already starting from a higher level—improved remarkably. Also, their job satisfaction improved.

Third, based on the results in Table 4 we can test Hypothesis 2, with which we postulate that people who highly crafted their off-job domain report especially improved home conditions and general well-being compared to low off-job crafters. Looking at the group of high off-job crafters, their home resources also improved

as expected. Particularly their social support at home has considerably improved ($d = 0.28$), whereas the other home resources, namely autonomy and developmental possibilities at home, slightly improved with effect sizes of 0.16 and 0.17, respectively. Even more remarkably, their job resources unexpectedly improved, especially manager support and developmental possibilities at work. Finally, not only their general life satisfaction but also their job satisfaction has improved with effect sizes of $d = 0.20$ and 0.33. Thus, Hypothesis 2 can also be supported.

DISCUSSION

The research questions of this study were, first, to examine how the COVID-19 has affected the working population in terms of their work and home situation, well-being and health. Second, we wanted to find out whether job and off-job crafting can help to maintain well-being during these challenging times.

The results showed that the individual perception of work and non-work situations and several associated parameters of well-being, and health had not been impaired by the consequences of the COVID-19 pandemic. On the contrary, it looks like, on average, employees even feel an improvement in their situation. This is remarkable and contrary to what one might have expected how people would feel facing such a pandemic with the imposition of drastic lockdown measures. It is also contrary to other studies that have reported negative effects, e.g. on the well-being of children, their families and overall family functioning (Prime *et al.*, 2020), as well as on the work domain (Kniffin *et al.*, 2020). Certainly, regional differences may play a role; the population of Germany and Switzerland may have suffered and still suffers far less from the direct and indirect consequences of the COVID-19 pandemic than the population of economically weaker countries and/or with weaker welfare states. However, also in these countries, substantial government-issued protective measures on behalf of the COVID-19 pandemic took place. Relevant to our study are the lockdowns of schools that had an impact on work/home balance for caregivers. Where these measures took place, schools offered further (online) teaching in Germany and Switzerland. Nevertheless, caregivers were confronted with substantial increases in childcare, also because they were expected to support the home schooling of children.

Opposite to other COVID-19 related studies, in our study, we had a panel of people that we already investigated before the outbreak. That made it possible to observe within-person pre–post comparisons. One reason

Table 1. Bivariate correlations among the study variables at t1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Work-related variables																					
1 Quantitative job demands	—																				
2 Qualitative job demands	0.494**	—																			
3 Job control	-0.223**	-0.093*	—																		
4 Role clarity at work	-0.219**	-0.349**	0.233**	—																	
5 Peer Support at work	-0.133**	-0.047	0.188**	0.370**	—																
6 Manager Support at work	-0.159**	-0.04	0.322**	0.271**	0.508**	—															
7 Developmental possibilities at work	-0.027	0.046	0.396**	0.280**	0.424**	0.584**	—														
Home-related variables																					
8 Quantitative home demands	0.264**	0.238**	-0.071	-0.099*	-0.065	-0.084*	-0.013	—													
9 Emotional home demands	0.226**	0.261**	-0.08	-0.196**	-0.086*	-0.008	0.584**	-0.008	—												
10 Mental home demands	0.237**	0.196**	0.005	-0.045	-0.012	-0.005	0.045	0.798**	0.591**	—											
11 Social support at home	-0.017	-0.065	0.162**	0.138**	0.260**	0.192**	0.188**	-0.146*	-0.169**	-0.039	—										
12 Autonomy at home	-0.166**	-0.226**	0.191**	0.304**	0.179**	0.185**	0.210**	-0.136*	-0.270**	-0.119**	0.454**	—									
13 Developmental possibilities at home	-0.075	-0.114**	0.138**	0.180**	0.161**	0.205**	0.266**	-0.118**	-0.173**	-0.069	0.518**	0.863**	—								
Outcomes																					
14 Work-home conflicts	0.536**	0.413**	-0.189**	-0.322**	-0.223**	-0.153**	-0.123**	0.387**	0.484**	0.335**	-0.098*	-0.300**	-0.219**	—							
15 Sense of Coherence	-0.259**	-0.340**	0.218**	0.366**	0.295**	0.254**	0.343**	-0.278**	-0.410**	-0.257**	0.330**	0.451**	0.449**	-0.549**	—						
16 Burnout	0.062	0.173**	-0.06	-0.073	-0.029	-0.016	-0.059	0.143**	0.132**	0.147**	-0.04	-0.140**	-0.131**	0.285**	-0.266**	—					
17 Job satisfaction	-0.246**	-0.214**	0.253**	0.323**	0.353**	0.425**	0.518**	-0.159**	-0.155**	-0.094*	0.202*	0.182**	0.204**	-0.347**	0.475**	-0.140**	—				
18 Mental wellbeing	-0.245**	-0.350**	0.241**	0.394**	0.323**	0.268**	0.324**	-0.256**	-0.353**	-0.209**	0.377**	0.484**	0.482**	-0.309**	0.817**	-0.275**	0.435**	—			
19 General life satisfaction	-0.099*	-0.124**	0.115**	0.126**	0.119**	0.106**	0.184**	-0.276**	-0.355**	-0.261**	0.418**	0.337**	0.384**	-0.309**	0.555**	-0.164**	0.442**	0.523**	—		
20 Self-rated health	-0.164**	-0.165**	0.166**	0.143**	0.239**	0.188**	0.209**	-0.104*	-0.212**	-0.118**	0.191**	0.268**	0.281**	-0.275**	0.402**	-0.148**	0.243**	0.404**	0.272**	—	
Crafting																					
21 Job crafting	0.113**	0.093*	0.287**	0.120**	0.245**	0.462**	0.540**	0.114**	0.123**	0.179**	0.266**	0.222**	0.347**	0.055	0.189**	-0.078	0.242**	0.209**	0.131**	0.192**	—
22 Off-job crafting	-0.133**	-0.152**	0.124**	0.182**	0.165**	0.112**	0.149**	-0.097*	-0.128**	-0.049	0.341**	0.536**	0.533**	-0.296**	0.366**	-0.129**	0.177**	0.440**	0.359**	0.214**	0.234**

Note. N = 597. *p ≤ 0.05, **p ≤ 0.01 (two-tailed).

Table 2. Bivariate correlations among the study variables at t2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Work-related variables																					
1 Quantitative job demands	—																				
2 Qualitative job demands	0.516**	—																			
3 Job control	-0.218**	-0.114**	—																		
4 Role clarity at work	-0.239**	-0.390**	0.301**	—																	
5 Peer Support at work	-0.156**	-0.091*	0.228**	0.402**	—																
6 Manager Support at work	-0.194**	-0.090*	0.357**	0.339**	0.516**	—															
7 Developmental possibilities at work	0.016	0.023	0.439**	0.381**	0.422**	0.527**	—														
Home-related variables																					
8 Quantitative home demands	0.319**	0.178**	-0.123**	-0.122**	-0.073	-0.07	0.016	—													
9 Emotional home demands	0.266**	0.297**	-0.067	-0.231**	-0.109**	-0.028	-0.021	0.541**	—												
10 Mental home demands	0.295**	0.169**	-0.048	-0.118**	-0.039	-0.023	0.045	0.802**	0.559**	—											
11 Social support at home	-0.065	-0.081*	0.184**	0.232**	0.297**	0.281**	0.294**	-0.069	-0.138**	0.036	—										
12 Autonomy at home	-0.144**	-0.195**	0.228**	0.324**	0.307**	0.233**	0.293**	-0.129**	-0.244**	-0.102*	0.480**	—									
13 Developmental possibilities at home	-0.073	-0.156**	0.196**	0.237**	0.270**	0.224**	0.323**	-0.068	-0.128**	0.009	0.539**	0.884**	—								
Outcomes																					
14 Work-home conflicts	0.531**	0.465**	-0.235**	-0.359**	-0.192**	-0.170**	-0.114**	0.377**	0.439**	0.327**	-0.121**	-0.260**	-0.178**	—							
15 Sense of Coherence	-0.282**	-0.412**	0.280**	0.443**	0.293**	0.306**	0.375**	-0.209**	-0.408**	-0.153**	0.376**	0.468**	0.435**	-0.481**	—						
16 Burnout	0.102*	0.134**	-0.122**	-0.172**	-0.114**	-0.167**	-0.173**	0.153**	0.139**	0.119**	-0.074	-0.101*	-0.107**	0.298**	-0.252**	—					
17 Job satisfaction	-0.264**	-0.274**	0.425**	0.447**	0.337**	0.458**	0.528**	-0.115**	-0.142**	-0.059	0.216**	0.264**	0.245**	-0.371**	0.478**	-0.201**	—				
18 Mental well-being	-0.225**	-0.365**	0.268**	0.409**	0.343**	0.289**	0.319**	-0.210**	-0.335**	-0.140**	0.430**	0.473**	0.447**	-0.484**	0.746**	-0.234**	0.472**	—			
19 General life satisfaction	-0.129**	-0.209**	0.203**	0.324**	0.231**	0.197**	0.294**	-0.205**	-0.310**	-0.107**	0.534**	0.434**	0.440**	-0.347**	0.600**	-0.178**	0.429**	0.587**	—		
20 Self-rated health	-0.196**	-0.241**	0.187**	0.151**	0.251**	0.253**	0.235**	-0.086*	-0.194**	-0.090*	0.250**	0.275**	0.291**	-0.251**	0.407**	-0.209**	0.345**	0.386**	0.265**	—	
Crafting																					
21 Job crafting	0.174**	0.077	0.266**	0.078	0.289**	0.469**	0.549**	0.222**	0.211**	0.282**	0.295**	0.219**	0.318**	0.137**	0.190**	-0.058	0.285**	0.227**	0.158**	0.221**	—
22 Off-job crafting	-0.117**	-0.116**	0.170**	0.161**	0.231**	0.245**	0.218**	-0.054	-0.037	0.019	0.353**	0.488**	0.491**	-0.186**	0.394**	-0.147**	0.195**	0.422**	0.368**	0.255**	0.223**

Note. N = 597. * $p \leq 0.05$, ** $p \leq 0.01$ (two-tailed).

Table 3. Means (M), standard deviations (SD), mean comparisons with p -values [$*p \leq 0.05$, $**p \leq 0.01$, $***p \leq 0.001$ (two-tailed)] (Δ), effect sizes Cohen's d (d) and tendency of pre–post comparison (tend.); total sample

Variable			Total sample (N = 593)				
			M	SD	Δ	$ d $	tend.
Working situation	Quantitative job demands	t1	2.58	0.76			
		t2	2.53	0.78	–0.05*	0.07	+
	Qualitative job demands	t1	2.29	0.86			
		t2	2.23	0.85	–0.07*	0.08	+
	Job control	t1	3.33	0.90			
		t2	3.46	0.90	0.13***	0.14	+
	Role clarity at work	t1	4.24	0.63			
		t2	4.30	0.64	0.06**	0.09	+
	Peer Support at work	t1	3.56	0.77			
		t2	3.61	0.80	0.05	0.07	+
	Manager Support at work	t1	3.11	0.97			
		t2	3.22	1.01	0.11***	0.11	+
	Developmental possibilities at work	t1	3.20	0.95			
		t2	3.33	0.96	0.13***	0.13	+
Home situation	Quantitative home demands	t1	3.00	0.83			
		t2	2.98	0.80	–0.03	0.03	+
	Emotional home demands	t1	2.53	0.76			
		t2	2.51	0.72	–0.02	0.03	+
	Mental home demands	t1	2.98	0.87			
		t2	2.94	0.83	–0.04	0.04	+
	Social support at home	t1	3.04	0.99			
		t2	3.11	1.01	0.07*	0.07	+
	Autonomy at home	t1	3.50	0.74			
		t2	3.53	0.77	0.02	0.03	+
	Developmental possibilities at home	t1	3.14	0.85			
		t2	3.19	0.90	0.05	0.05	+
	Work–home conflicts	t1	1.77	0.46			
		t2	1.73	0.44	–0.04***	0.09	+
Sense of coherence	t1	5.03	1.14				
	t2	5.04	1.12	0.01	0.01	+	
Work-related outcomes	Burnout	t1	3.01	0.32			
		t2	2.97	0.33	–0.04*	0.14	+
	Job satisfaction	t1	4.60	1.40			
		t2	4.87	1.30	0.27***	0.19	+
General outcomes	Mental wellbeing	t1	3.67	0.66			
		t2	3.67	0.66	–0.01	0.01	–
	General life satisfaction	t1	4.96	1.36			
		t2	5.09	1.28	0.13***	0.10	+
	Self-rated health	t1	2.59	0.79			
		t2	2.65	0.79	0.06*	0.08	+

why we find this rather surprising result might be that we evaluate our psychosocial situation but also our well-being and health mostly referring to a higher level of observation. This means that my individual experience of my actual situation is dependent on my evaluation of the situation on a macro level (local, regional,

national, international, global). And in the specific case of the COVID-19 crisis, the assessment of the global situation might have been quite negative with almost 1 million confirmed cases (823 626) and over 40 000 reported deaths (40 598) in April when we gathered the data (WHO situation report April 2020). Therefore,

Table 4. Means (M), standard deviations (SD), mean comparisons with *p*-values [$*p \leq 0.05$, $**p \leq 0.01$, $***p \leq 0.001$ (two-tailed)] (Δ), effect sizes Cohen's *d* (*d*) and tendency of pre-post comparison (tend.); high/low job crafters, high/low off-job crafters

Variable	High job crafters (N = 132)					Low job crafters (N = 141)					High off-job crafters (N = 120)					Low off-job crafters (N = 112)				
	M	SD	A	d	tend.	M	SD	A	d	tend.	M	SD	A	d	tend.	M	SD	A	d	tend.
Working situation	t1	2.70	0.75			2.37	0.79				2.53	0.80				2.71	0.83			
	t2	2.70	0.82	0.00	0.00	0	2.38	0.82	0.01	0.01	-	2.46	0.80	-0.07	.09	+	2.73	0.83	0.02	0.03
Qualitative job demands	t1	2.39	0.91			2.10	0.85				2.18	0.89				2.43	0.88			
	t2	2.26	0.91	-0.13*	0.14	+	2.12	0.88	0.02	0.02	-	2.41	0.93	-0.11	.12	+	2.41	0.86	-0.02	0.03
Job control	t1	3.58	0.87			3.07	0.98				3.45	1.00				3.22	0.92			
	t2	3.80	0.84	0.22***	0.26	+	3.15	0.96	0.09	0.09	+	3.67	0.97	0.23***	.22	+	3.29	0.89	0.07	0.07
Role clarity at work	t1	4.28	0.62			4.24	0.67				4.32	0.71				4.13	0.67			
	t2	4.37	0.62	0.09	0.14	+	4.22	0.67	-0.02	0.03	-	4.51	0.62	0.19***	.27	+	4.19	0.65	0.07	0.10
Peer Support at work	t1	3.79	0.72			3.38	0.82				3.67	0.87				3.38	0.83			
	t2	3.94	0.79	0.15*	0.20	+	3.35	0.91	-0.03	0.03	-	3.84	0.87	0.16*	.19	+	3.34	0.77	-0.04	0.05
Manager Support at work	t1	3.61	0.94			2.58	0.95				3.33	1.09				2.88	0.92			
	t2	3.85	0.87	0.24***	0.26	+	2.60	1.01	0.02	0.02	+	3.60	1.06	0.27***	.24	+	2.85	1.00	-0.03	0.03
Developmental possibilities at work	t1	3.76	0.89			2.51	0.94				3.40	1.07				3.12	0.91			
	t2	3.98	0.87	0.22***	0.25	+	2.63	0.96	0.12*	0.13	+	3.71	1.05	0.31***	.29	+	3.15	0.89	0.03	0.03
Home situation	t1	3.18	0.80			2.92	0.81				2.99	0.86				3.24	0.90			
	t2	3.25	0.82	0.07	0.08	-	2.78	0.82	-0.15**	0.18	+	2.97	0.81	-0.02	.03	+	3.19	0.85	-0.05	0.06
Emotional home demands	t1	2.62	0.82			2.33	0.75				2.53	0.84				2.71	0.83			
	t2	2.66	0.80	0.03	0.04	-	2.27	0.64	-0.06	0.08	+	2.47	0.76	-0.06	.07	+	2.61	0.80	-0.11	0.13
Mental home demands	t1	3.24	0.83			2.83	0.85				2.97	0.93				3.21	0.90			
	t2	3.28	0.87	0.04	0.04	-	2.66	0.84	-0.16***	0.19	+	3.01	0.92	0.04	.04	-	3.09	0.82	-0.11	0.13
Social support at home	t1	3.45	0.97			2.76	0.94				3.40	1.03				2.65	0.91			
	t2	3.63	0.95	0.18*	0.19	+	2.81	1.06	0.05	0.05	+	3.69	0.99	0.29***	.28	+	2.69	0.94	0.04	0.05
Autonomy at home	t1	3.81	0.75			3.42	0.66				3.96	0.73				3.09	0.79			
	t2	3.92	0.71	0.11	0.14	+	3.44	0.82	0.02	0.03	+	4.08	0.64	0.12*	.16	+	3.01	0.81	-0.08	0.11
Developmental possibilities at home	t1	3.62	0.82			2.90	0.81				3.73	0.84				2.69	0.83			
	t2	3.71	0.79	0.10	0.12	+	2.96	0.97	0.06	0.08	+	3.88	0.75	0.14	.17	+	2.64	0.89	-0.05	0.06
Work-home conflicts	t1	1.81	0.50			1.67	0.48				1.68	0.52				1.94	0.50			
	t2	1.79	0.47	-0.01	0.03	+	1.62	0.44	-0.05	0.10	+	1.63	0.50	-0.04	.08	+	1.89	0.45	-0.05	0.10
Sense of coherence	t1	5.28	1.05			4.90	1.14				5.52	1.11				4.60	1.07			
	t2	5.37	1.03	0.09	0.08	+	4.82	1.15	-0.08	0.07	-	5.67	1.02	0.15	.13	+	4.50	1.15	-0.10	0.09
Work-related outcomes	t1	3.00	0.34			3.05	0.27				2.92	0.36				3.06	0.34			
	t2	2.94	0.29	-0.05	0.16	+	2.99	0.39	-0.06	0.21	+	2.93	0.38	0.01	.03	+	3.04	0.34	-0.02	0.07
Job satisfaction	t1	4.92	1.38			4.13	1.47				4.73	1.60				4.47	1.34			
	t2	5.27	1.15	0.35***	0.25	+	4.34	1.50	0.21	0.14	+	5.26	1.28	0.53***	.33	+	4.51	1.38	0.04	0.03
General outcomes	t1	3.89	0.67			3.56	0.64				4.00	0.69				3.37	0.61			
	t2	3.91	0.60	0.03	0.04	+	3.52	0.69	-0.04	0.07	-	4.07	0.67	0.07	.10	+	3.29	0.65	-0.08	0.13
General life satisfaction	t1	5.32	1.34			4.83	1.32				5.44	1.27				4.32	1.38			
	t2	5.48	1.26	0.16	0.12	+	4.91	1.28	0.08	0.06	+	5.69	1.17	0.25*	.20	+	4.38	1.30	0.06	0.04
Self-rated health	t1	2.86	0.75			2.50	0.70				2.78	0.80				2.25	0.80			
	t2	2.98	0.69	0.12*	0.16	+	2.53	0.73	0.03	0.04	+	2.89	0.79	0.11*	.14	+	2.32	0.87	0.07	0.09

participants would have considered their situation as quite comfortable, overall; at least in Germany and German-speaking Switzerland.

Regarding our second research question, we indeed see that high crafters benefit from an increase in several variables: (i) High job crafters experienced a positive change in their working life with less qualitative job demands (even though this change failed to reach the threshold of 0.20 in Cohen's *d*) and increased job resources (job control, peer support and manager support). Moreover, they feel being more supported at home and reported a remarkably positive change in job satisfaction. This confirms our assumption that high job crafters are successful in utilizing the changes imposed by the crises to even improve their work and private life situation in the face of crisis.

The group of low job crafters reported rather fewer demands at home. This finding may be due to other characteristics of this group: Maybe they do not craft their job because their employers reduced their working hours which was a common phenomenon in Switzerland and Germany during the period of lockdown. This resulted in less stress at work and more time at home wherefore their home demands may have decreased.

In the group of high off-job crafters, the situation changed even more remarkably. Especially job resources changed for the better (job control, role clarity, manager support and developmental possibilities at work). Moreover, they reported significantly more support at home. We assume that the lockdown with often reduced working hours (in our study 34.1% of the participants reported a reduction of their working hours) and an increased proportion of hours working from home allowed us to devote more time to off-job crafting. The build-up of home resources might have helped to deal with job demands better, as well as to perceive and utilize available resources at work—without necessarily to actively craft new job resources (Hobfoll, 2011). Their job satisfaction improved even more than in the group of job crafters—potentially because they did not need to actively craft their job resources, which also drains energy but could just better utilize existing ones. As both their work- and non-work domain improved, not surprisingly also their general life satisfaction increased. In the group of low off-job crafters, the situation stayed more or less the same.

Overall, we find that the resource situation has improved in both work and personal life across the sample and time. These improvements can be observed especially among the high crafters. For specific resources, the reasons for this increase are particularly plausible. In a crisis, people tend to help each other. Especially during

the first lockdown, when we felt collectively affected by a drastic change that everyone had to learn to deal with equally, a great solidarity among people was reported (Killgore *et al.*, 2020). Together with more time spent at home, which, in turn, provided more opportunities for social support from partners and family, this may explain the increase in social support. The boost in job autonomy is also not surprising and has been reported as a relevant job resource in improving the effectiveness and well-being of people working from home, besides social support (Wang *et al.*, 2021). The ability to work from home increased the flexibility of many workers to decide when and how to work.

Why this elevation of resources was observed specifically in the high crafters group would need to be examined in further studies. Our data do not allow us to determine whether the better resource situation is a consequence or a cause of crafting, both seem plausible. A common challenge with crafting is that people who would particularly benefit from it (e.g. people who feel depressed) lack the energy to initiate such proactive behaviors themselves. Therefore, it is important to pay special attention on how to motivate such individuals when planning interventions aimed at increasing crafting behaviors.

Strengths and limitations

A unique strength of this study is its within-person pre-post comparison. Whereas other studies include only data gathered after the COVID-19 outbreak which—in the best case—can be compared with general population data, in this study we can observe how the situation has changed over time within the same sample.

Moreover, while many studies are concerned with the impact of the pandemic on the macro-level (e.g. its economic impact or its impact on public health), our study focused on individual behaviors and therefore allows us to draw conclusions on the individual level.

A clear limitation of the study is its questionable generalizability. As already mentioned above, we investigated countries that have not been hit exceptionally hard by the pandemic (at least not by the first wave). Moreover, these two countries are rather rich and the population's fear of facing poverty is very low, even though a general job security was not granted. It is therefore not possible to generalize our findings beyond the studied countries. Another limitation is that our study refers to effects occurring in the short-term after the lockdown. Further consequences of the pandemic will appear with increasing time which are not captured in our data. Moreover, about 34% of participants reported reduction

in working time, which also implies a possible reduction in income. Governments of both countries had short-time work measures in place to help employers and employees deal with the financial consequences of the crisis. However, in our study we did not further investigate the consequences for the specific subgroups of short-time workers as this would further fragment our sample. It would be very relevant to investigate this in more detail and have also pre–post data from other countries with different socio-economic backgrounds.

In addition, due to our research questions the sample consists of employees. Unemployed or retired people who may have been more negatively affected by the pandemic are excluded. We aimed to reach a sample that is a good representation of our target population, however, there is a slight over-representation of employees without children (68% compared to 63% in Switzerland and 57% in Germany). This may have affected our results in a more positive way as employees without children do not have parenting obligations and can manage their work-life balance more easily even during the crisis.

Furthermore, we used data from an online panel, so participation is restricted to individuals with internet access. However, this should not have any major impact on our sample as internet access is well above 95% in the population of both countries.

Presented analyses do not include intervening effects on our study outcomes, such as school holidays that may have affected, e.g. the duties for child care. However, detailed analysis and description regarding this would have exceeded the scope of our study. Particularly because each canton or state in the countries we studied has varying dates for school holidays. To balance this, we refer to a recent study covering the time before the COVID-19 pandemic in December 2019 and during the pandemic between March and September 2020 (Zacher *et al.*, 2021). There, trajectories of task proficiency, proactivity and adaptivity were not affected even though data was collected in various states in Germany, a region we similarly included in our study. In another study covering the same country, Rudolph and Zacher (2021) refer to family demands and satisfaction with family life during the COVID-19 pandemic. There, school vacation is described as a diverse phenomenon across 16 German states and was as well not integrated in the analysis.

A final limitation we identify in this study is that the measurement of the situation took place already about a month after the imposition of the lockdown to combat the first wave, thus reflecting rather short-term changes related to the pandemic. Changes in more long-term well-being indicators, such as burnout, will not emerge during this period of time.

CONCLUSIONS

As the situation has rather improved than worsened in the whole sample, this is a unique opportunity to learn not only for employees but also for employers and organizations. First, at least some people seem to benefit from being at home most of the time. Of course, it can boost loneliness for those with no family and children at home. However, for others being surrounded by people they love might satisfy their need for relatedness rather than being in the office the whole day (Deci and Ryan, 2012). Moreover, for employers it seems beneficial or, at least, not detrimental. Especially the group of high crafters experienced a boost in job satisfaction which is positively related to job performance (Judge *et al.*, 2001). It is not easy to make assumptions about the factors that caused these positive changes: One explanation might be that the improved working situation has led to higher satisfaction. Moreover, another explanation might lie in individual behavior—the salutogenic job and off-job crafting. High crafters can activate internal and external resources that help them to master even demanding and new situations. Therefore, initiatives to help people to learn such behaviors should be developed and provided to a broad public. In the case of job crafting research has shown that it is possible to increase it via intervention (van Wingerden *et al.*, 2017).

FUNDING

This research received funding from the University of Zurich Foundation.

REFERENCES

- Antonovsky, A. (1979) *Health, Stress, and Coping*. Jossey-Bass, San Francisco, CA.
- Antonovsky, A. (1987) *Unraveling the Mystery of Health*. Jossey-Bass, San Francisco, CA.
- Bakker, A. B. and Demerouti, E. (2007) The job demands-resources model: state of the art. *Journal of Managerial Psychology*, **22**, 309–328.
- Bakker, A. B. and Demerouti, E. (2017) Job demands–resources theory: taking stock and looking forward. *Journal of Occupational Health Psychology*, **22**, 273–285.
- Cohen, J. (1992) A power primer. *Psychological Bulletin*, **112**, 155–159.
- Cousins, R., MacKay, C. J., Clarke, S. D., Kelly, C., Kelly, P. J. and McCaig, R. H. (2004) ‘Management Standards’ work-related stress in the UK: practical development. *Work & Stress*, **18**, 113–136.
- de Bloom, J., Vaziri, H., Tay, L. and Kujanpää, M. (2020) An identity-based integrative needs model of crafting: crafting

- within and across life domains. *Journal of Applied Psychology*, **105**, 1423–1446.
- Deci, E. L. and Ryan, R. M. (2012) Self-determination theory. In Van Lange, P.A.M., Kruglanski, A.W. and Higgins, E.T. (eds.), *Handbook of theories of social psychology*. Sage Publications Ltd., pp. 416–436. <https://doi.org/10.4135/9781446249215.n21>.
- Demerouti, E., Bakker, A. B., Nachreiner, F. and Schaufeli, W. B. (2001) The job demands-resources model of burnout. *Journal of Applied Psychology*, **86**, 499–512.
- Demerouti, E., Bakker, A. B. and Voydanoff, P. (2010) Does home life interfere with or facilitate job performance? *European Journal of Work and Organizational Psychology*, **19**, 128–149.
- Demerouti, E., Peeters, M. C. W. and van der Heijden, B. I. J. M. (2012) Work-family interface from a life and career stage perspective: the role of demands and resources. *International Journal of Psychology: Journal International de Psychologie*, **47**, 241–258.
- Eriksson, M. (2017) The sense of coherence in the salutogenic model of health. In Mittelmark, M. B., Sagy, S., Eriksson, M., Bauer, G. F., Pelikan, J. M., Lindström, B., and Espnes, G. A. (eds), *The Handbook of Salutogenesis*. Springer, Cham, pp. 91–96.
- Eurofound (2020). Living, working and COVID-19, COVID-19 series, Publications Office of the European Union, Luxembourg.
- Geurts, S. A. E., Taris, T. W., Kompier, M. A. J., Dikkers, J. S. E., Van Hooff, M. L. M. and Kinnunen, U. M. (2005) Work-home interaction from a work psychological perspective: development and validation of a new questionnaire, the SWING. *Work & Stress*, **19**, 319–339.
- Hobfoll, S. E. (2011) Conservation of resource caravans and engaged settings. *Journal of Occupational and Organizational Psychology*, **84**, 116–122.
- International Labour Organization (2020). *Policy Brief: The World of Work and COVID-19*. Geneva. https://www.ilo.org/employment/Informationresources/covid-19/other/WCMS_748323?lang=en.
- Judge, T. A., Thoresen, C. J., Bono, J. E. and Patton, G. K. (2001) The job satisfaction–job performance relationship: a qualitative and quantitative review. *Psychological Bulletin*, **127**, 376–407.
- Killgore, W. D. S., Taylor, E. C., Cloonan, S. A. and Dailey, N. S. (2020) Psychological resilience during the COVID-19 lockdown. *Psychiatry Research*, **291**, 113216.
- Kniffin, K. M., Narayanan, J., Ansel, F., Antonakis, J., Ashford, S. J., Bakker, A. B. et al. (2020) *COVID-19 and the Workplace: Implications, Issues, and Insights for Future Research and Action*. *American Psychologist*, 1–52. <https://doi.org/10.1037/amp0000716>.
- Kristensen, T. S., Borritz, M., Villadsen, E. and Christensen, K. B. (2005) The Copenhagen burnout inventory: a new tool for the assessment of burnout. *Work & Stress*, **19**, 192–207.
- Kujanpää, M., Syrek, C., Tay, L., Kinnunen, U., Mäkikangas, A., Shimazu, A. et al. (2020) Needs-based Off-job Crafting Across Different Life Domains and Cultures. *Submitted*.
- Lang, G. and Bachinger, A. (2017) Validation of the German Warwick-Edinburgh mental well-being scale (WEMWBS) in a community-based sample of adults in Austria: a bi-factor modelling approach. *Journal of Public Health*, **25**, 135–146.
- Langeland, E. and Vinje, H. F. (2013) The significance of salutogenesis and well-being in mental health promotion: from theory to practice. In Keyes, C.L. (ed.), *Mental Well-Being*. Springer, pp. 299–329.
- Peeters, M. C. W., Montgomery, A. J., Bakker, A. B. and Schaufeli, W. B. (2005) Balancing work and home: how job and home demands are related to burnout. *International Journal of Stress Management*, **1**, 43–61.
- Petrou, P., Demerouti, E., Peeters, M. C. W., Schaufeli, W. B. and Hetland, J. (2012) Crafting a job on a daily basis: contextual correlates and the link to work engagement. *Journal of Organizational Behavior*, **33**, 1120–1141.
- Prime, H., Wade, M. and Browne, D. T. (2020) Risk and resilience in family well-being during the COVID-19 pandemic. *American Psychologist*, **75**, 631–643.
- Rimann, M. and Udris, I. (1997) Fragebogen - Salutogenetische, subjektive Arbeitsanalyse [Questionnaire - Salutogenetic, subjective analysis of work]. <http://www.mentalhealthpromotion.net/resources/salsa.pdf> (last accessed 25 January 2022).
- Rudolph, C. W., Allan, B., Clark, M., Hertel, G., Hirschi, A., Kunze, F. et al. (2020) Pandemics: Implications for Research and Practice in Industrial and Organizational Psychology.
- Rudolph, C. W., Katz, I. M., Lavigne, K. N. and Zacher, H. (2017) Job crafting: a meta-analysis of relationships with individual differences, job characteristics, and work outcomes. *Journal of Vocational Behavior*, **102**, 112–138.
- Rudolph, C. W. and Zacher, H. (2021) Family demands and satisfaction with family life during the COVID-19 pandemic. *Couple and Family Psychology: Research and Practice*, **10**, 249–259. <https://doi.org/10.1037/cfp0000170>.
- Schumacher, J., Gunzelmann, T. and Brähler, E. (2000) Deutsche Normierung der sense of coherence scale von Antonovsky. *Diagnostica*, **46**, 208–213.
- Schweizer Haushalt-Panel (2009). Schweizer Haushalt-Panel. <http://www.swisspanel.ch/spip.php?lang=de> (last accessed 25 January 2022).
- Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S. et al. (2007) The Warwick-Edinburgh mental well-being scale (WEMWBS): development and UK validation. *Health and Quality of Life Outcomes*, **5**, 63.
- Tims, M. and Bakker, A. B. (2010) Job crafting: towards a new model of individual job redesign. *SA Journal of Industrial Psychology*, **36**, 1–9.
- Tims, M., Bakker, A. B. and Derks, D. (2012) Development and validation of the job crafting scale. *Journal of Vocational Behavior*, **80**, 173–186.
- van Bavel, J. J. V., Baicker, K., Boggio, P. S., Capraro, V., Cichocka, A., Cikara, M. et al. (2020) COVID-19 pandemic response. *Nature Human Behaviour*, **4**, 460–471.
- van Wingerden, J., Bakker, A. B. and Derks, D. (2017) The longitudinal impact of a job crafting intervention. *European Journal of Work and Organizational Psychology*, **26**, 107–119.

Wang, B., Liu, Y., Qian, J. and Parker, S. K. (2021) Achieving effective remote working during the COVID-19 pandemic: a work design perspective. *Applied Psychology*, **70**, 16–59.

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

Zacher, H., Rudolph, C. and Posch, M. (2021) Individual differences and changes in self-reported work performance during the early stages of the COVID-19 pandemic, *Zeitschrift Für Arbeits- Und Organisationspsychologie A&O*, **65**, 188–201. <https://doi.org/10.1026/0932-4089/a000365>.