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Selection, Optimization, and Compensation Strategies and Within-Day Changes in Occupational Well-Being

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Abstract

According to the selection, optimization, compensation (SOC) model, employees can actively influence their well-being. However, associations could differ at the within- and between-person levels. Considering SOC strategies as dynamic processes that unfold during a workday, we hypothesized that selection-focused strategies are related to decreased work fatigue, whereas pursuit-focused strategies are related to increased work fatigue at the end of the work day. We further hypothesized that preference-based strategies are related to increased job satisfaction, whereas lossbased strategies are related to decreased job satisfaction at the end of a workday. We tested these hypotheses with a sample of 244 employees who completed twice-daily measurements over ten consecutive work days. Day-level results of multi-level analyses showed that, controlling for morning levels of workload and autonomy, loss-based selection was positively related to changes in work fatigue. Optimization and compensation were positively related to changes in job satisfaction, whereas loss-based selection was negatively related to changes in job satisfaction. At the person-level, loss-based selection was associated with higher work fatigue, and optimization with higher job satisfaction. In supplemental analyses, we found little evidence for reversed relationships. Results suggest that links exist between SOC strategies and within-day changes in occupational well-being, yet the direction of effects differs between strategies.

Keywords SOC strategies \cdot Work fatigue \cdot Job satisfaction \cdot Diary study \cdot Action-regulation

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There is a broad consensus in the literature that the attainment of work goals is associated with higher occupational well-being (Harris et al., 2003; Locke & Latham, 2002). Accordingly, researchers have attempted to identify strategies that employees can use to achieve their work goals. A well-established theory of action regulation is the selection, optimization, and compensation (SOC) model (Freund & Baltes, 2000). As shown in Fig. 1, this model suggests that employees need to actively manage their personal resources to achieve their goals by using strategies of elective selection (i.e., prioritization of some goals over others in line with preferences), loss-based selection (i.e., reorganization of goal hierarchies in response to resource losses), optimization (i.e., resource investment), and compensation (i.e., substitution of lost resources). A meta-analytic review has shown that interindividual differences in the use of SOC strategies are positively related to occupational well-being, whereas SOC strategy use is not significantly related to occupational strain (Moghimi et al., 2017).

Notably, the majority of previous studies linking SOC strategies to occupational well-being have framed these strategies as stable behavioral tendencies and, thus, used cross-sectional and between-person designs (Moghimi et al., 2017). Yet, SOC strategy use also manifests as a dynamic process that can vary across the workday. There is currently limited knowledge regarding the within-person variability of SOC strategy use at work and its short-term, dynamic outcomes, and whether these differ in magnitude and/or direction from between-person effects of SOC strategy use (see Zacher & Rudolph, 2020). The few studies that have investigated within-person associations of SOC strategy use with occupational well-being (Breevaart & Zacher, 2018; Schmitt et al., 2012; Venz et al., 2018; Zacher et al., 2015) have assessed the core constructs once per day. Although clearly insightful, it seems important to account for baseline levels at the start of a workday when predicting daily well-being, in order to link SOC strategy use to short-term changes in these outcomes. Furthermore, most previous studies (24 out of 37; Moghimi et al., 2017) have either reported only the overall (i.e., average) use of SOC strategies, or reported only two or three of the four strategies. For a full understanding of SOC strategy use as a dynamic process unfolding across the workday, it is important to consider differential effects of all four individual strategies.

In this study, we view SOC strategy use as a dynamic process of resource investment that impacts employees' daily occupational well-being both in the short- and long-term. To this end, we hypothesize and test both between- and within-person relationships of all four SOC strategies with change across a workday in two indices of occupational well-being: work fatigue and job satisfaction. As shown in Fig. 1, we distinguish SOC strategies into those motivated by preferences (i.e., elective selection and optimization) vs. losses (i.e., loss-based selection and compensation), and into those directed at goal selection (i.e., elective selection and loss-based selection) vs. goal pursuit (i.e., optimization and compensation; Freund 2006). We focus on work fatigue and daily job satisfaction as two complementary well-being outcomes that reflect resource expenditure and affective experiences, respectively, resulting from the use of action regulation strategies (e.g., Schmitt et al., 2012). Furthermore, work fatigue and job satisfaction have been used as outcome variables in several key studies regarding SOC and well-being (e.g., Schmitt et al., 2012; Wiese et al., 2000; for an overview, see Moghimi et al., 2017). To allow comparison with those previous studies, we incorporated work fatigue and job satisfaction as potential outcomes of SOC strat-

	Preference-based strategies	Loss-based strategies
Selection-focused strategies	Elective Selection	Loss-based Selection
Pursuit-focused strategies	Optimization	Compensation

Fig. 1 Classification of selection, optimization, and compensation strategies

egy use. Fatigue entails a feeling of extreme tiredness and exhaustion at work (Frone & Tidwell, 2015), whereas job satisfaction involves the extent to which employees think positively about, and experience affective pleasure at work (Spector, 1997). Assessing momentary levels of work fatigue and job satisfaction twice a day across multiple work days allowed us to control for earlier work fatigue and satisfaction levels on the same day when estimating effects of SOC strategies on these outcomes.

With this study, we aim to contribute to the literature in two meaningful ways. First, we advance a more dynamic account of action regulation and well-being at work by assessing the use of SOC strategies, job satisfaction, and work fatigue repeatedly at the daily level. This approach builds on and extends previous research that mainly focused on comparing the effects of SOC strategies on well-being outcomes *either* at the between- *or* at the within-person level, but never disentangling these two levels within the same study. Doing so allows to compare short- and long-term effects of resource investment at work on people's well-being. For example, adopting loss-based selection may be detrimental to well-being in the short-term given that original preferences need to be abandoned, yet may be beneficial to well-being in the longer-term, as resources get invested into more achievable goals.

Second, we advance theorizing on SOC and occupational well-being by focusing on the effects of each unique SOC strategy. Researchers have speculated that the use of some SOC strategies may have detrimental effects on well-being, whereas other strategies may have beneficial outcomes, which may have resulted in a meta-analytic zero relationship between overall SOC strategy use and strain (Moghimi et al., 2017). We introduce the distinction of preference vs. loss-based as well as goal selection vs. goal pursuit to the organizational literature, which has so far mostly focused on overall SOC strategy use (Moghimi et al., 2017).

Selection, Optimization, and Compensation Strategies

The SOC model suggests that the use of four action regulation strategies helps to maintain effective functioning and well-being in face of high demands and/or low

resources (Freund & Baltes, 2000). The strategies can help employees to actively manage their resources according to present demands, and by doing so achieve their goals (Moghimi et al., 2019). The four SOC strategies can be categorized into selection-vs. pursuit-focused strategies and loss-vs. preference-based (see Fig. 1).

Elective selection involves goal-setting based on preference to achieve a desired state (Freund & Baltes, 2000). A key feature of elective selection is the selection of a small number of goals as opposed to pursuing multiple goals at the same time. An example of elective selection at work would be coming to work and deciding to respond to emails before taking or making any phone calls. Loss-based selection refers to the reorganization of a previous goal hierarchy due to a loss of internal or external resources. This strategy entails disengaging from unattainable goals, selecting new goals, and reorganizing goal priorities (Freund & Baltes, 2000). For instance, when experiencing problems with the internet connection, one could decide to make phone calls first and respond to emails later. Optimization refers to the adaptive allocating of existing resources such as attention, time, and effort to attain goals (Freund & Baltes, 2000). Individuals who engage in optimization acquire, refine, use, and re-activate internal or external means to achieve selected goals. An example of optimization at work would be investing a lot of effort and attention in preparing a presentation. Finally, *compensation*, like loss-based selection, is a strategy that can be used when people face a loss of internal or external resources. The strategy comprises the acquisition and use of new or previously unused resources to achieve a goal and thereby helps the individual to maintain functioning after a resource loss (Freund & Baltes, 2000). For instance, receiving an important phone call while working on a presentation and therefore experiencing a time-loss, one can compensate for this loss by asking a colleague for help.

SOC Strategy Use and Work Fatigue

Although a meta-analysis of between-person studies did not find a link between SOC strategy use and overall job strain (Moghimi et al., 2017), there are theoretical reasons to assume that *daily* use of individual SOC strategies may affect employees' feelings of fatigue. For instance, daily use of selection-focused (i.e., elective and loss-based selection) strategies may help to prevent work fatigue at the end of the workday because they channel resource investment into fewer, more attainable goals, rather than focusing on several, unattainable goals at the same time. Hence, selection-focused strategies facilitate adaptive allocation of other personal and occupational resources, such as time, attention, and energy and by doing so help to prevent work fatigue at the end of the workday. In contrast, pursuit-focused strategies (i.e., optimization and compensation) require effort expenditure and resource investment, which can be fatiguing because one has to invest resources to achieve previously selected goals. While this process might eventually help to attain one's goals on the long term, this resource investment can be depleting and lead to fatigue over the course of the workday.

Fatigue has been defined as extreme tiredness and reduced capacity that is experienced during and/or at the end of the workday (Frone & Tidwell, 2015). While multiple cross-sectional studies investigated links between demands, fatigue, and well-being outcomes (e.g., Querstret & Cropley 2012; Sluiter et al., 2003), diary studies are still rather scarce, especially in jobs that are not (physically) demanding at first sight. Importantly, the few studies that have investigated fatigue at the day-level confirm that fatigue is not static but can fluctuate day-to-day (Gross et al., 2011; Kuba & Scheibe, 2017) and within days (Grech et al., 2009; Zacher et al., 2014).

Reasons for experiencing work fatigue may be resource depletion and scarcity of new resources in face of high work demands (Demerouti et al., 2001; Karasek, 1979). For example, the central contention expressed in Karasek's (1979) influential demand-control model is that it is not high demands per se, but high demands in combination with a lack of job resources, that are associated with high job strain. Karasek (1979) argued that high job demands create arousal that cannot be transformed into action when employees lack resources on the job. Instead, the arousal associated with high job demands will be directed internally, resulting in fatigue and exhaustion. For example, Van Yperen & Hagedoorn (2003) showed that high job demands were associated with fatigue, but only when job resources were low. We suggest that by restricting current goals through elective selection and loss-based selection, resources are preserved better or invested more cautiously. This leads to a better management of the available resources and prevents work fatigue because there are sufficient resources left to counteract high demands.

Selection-focused strategies usually include short-term acts of goal selection that happen at one time point. In contrast, pursuit-focused strategies (i.e., optimization and compensation) are more effortful strategies that entail the consistent and persistent investment of resources in order to achieve desired states. Investing resources to reach desired outcomes, as in optimization, or searching for and applying compensatory means, as in compensation, is resource depleting and costs effort. We therefore assume that engaging in optimization and compensation are resource-depleting activities because they require a great amount of effort investment in a previously selected goal. This resource investment may lead to increased levels of fatigue at work. Thus, we hypothesized:

Hypothesis1: At the within-person level and accounting for previous work fatigue levels, (a) elective selection and (b) loss-based selection (i.e., selection-focused strategies) are related to decreased work fatigue, whereas (c) optimization and (d) compensation (i.e., pursuit-focused strategies) are related to increased work fatigue at the end of the work day.

SOC Strategy Use and Job Satisfaction

Meta-analytic results show that individual differences in SOC strategy use relate positively to global job satisfaction (Moghimi et al., 2017). However, some studies report negative or non-significant results between some of the SOC components and job satisfaction. For instance, in one of the first studies to assess SOC strategy use in the work context, Abraham and Hansson (1995) found that the relationship between compensation and job satisfaction was negative. In another study, Wiese and

colleagues (2000) found that compensation strategies were not significantly associated with job satisfaction, while there was a positive relationship of selection and optimization with job satisfaction. Schmitt and colleagues (2012) conducted a daily diary study across four days and showed that the relationship between daily SOC use (aggregated across the four dimensions) and daily job satisfaction was positive. Apparently, support for the positive relationship between SOC strategy use and job satisfaction is equivocal, which may be explained by the reliance on overall indices of SOC strategies rather than the individual SOC dimensions.

In the present study, we reasoned that preference-based strategies (i.e., elective selection and optimization) are positively related to daily job satisfaction while loss-based strategies (i.e., loss-based selection and compensation) are negatively related to daily job satisfaction. When engaging in preference-based strategies, employees may feel neither restricted in goal selection and the development of a goal hierarchy, nor in the means required for the pursuit of the selected goals. This is likely to be positively associated with job satisfaction. In contrast, when engaging in loss-based strategies, one is required to focus on a goal that was originally not preferred or pursue a goal with alternative means. The mere act of having to deviate from one's initial goal-pursuit implies a defeat which may be negatively associated with satisfaction (Locke & Latham, 2002). Accordingly, we hypothesized:

Hypothesis2: At the within-person level and accounting for previous job satisfaction levels, (a) elective selection and (b) optimization (i.e., preference-based strategies) are related to increased job satisfaction, whereas (c) loss-based selection and (d) compensation (i.e., loss-based strategies) are related to decreased job satisfaction at the end of a workday.

Additional Tests

In addition to our hypotheses, we tested whether the hypothesized within-person relationships between daily SOC strategy use and daily work fatigue and job satisfaction can be replicated at the *between-person level*. This approach allows us to consider individual SOC dimensions on the within- and between-person level at the same time. With our approach, we intend to test the claim that SOC strategy use can be considered as a trait-like variable as well as a state (Moghimi et al., 2019). To disentangle between and within-person variation in the variables of interest, we model the hypothesized relationship on both levels of analysis.

Furthermore, to challenge our main assumption that SOC strategies affect employees' daily levels of work fatigue and job satisfaction, we explored the reversed temporal order as well. Goal-setting research suggests significant relationships between variables such as positive affect, vitality, engagement, fatigue, and satisfaction, on the one hand, and goal-setting, on the other (Locke & Latham, 2002). For example, Richard & Diefendorff (2011) demonstrated that mood affects goal revision, with positive mood being positively related to goal revision, and negative mood being negatively related to goal revision. Merlo and colleagues (2017) further showed that negative affective states lead to less attentional allocation and regulation, which in turn leads to decreased performance, while the reversed is true for positive affective states. Given these findings, there is reason to assume that our indicators of daily well-being (i.e., fatigue and satisfaction) may enhance or inhibit employees' use of SOC strategies.

Method

Participants and Procedure

Data was collected with the help of an internet panel company that approached fulltime employees in the United Kingdom with a minimum age of 18 years. All participants were employed and no participants were retired. IP-addresses were checked with every entry to avoid double sign-ups. Before the start of the daily-diary phase, participants completed a baseline questionnaire of about 20 min. Daily data were collected over the course of ten work days, hence two weeks. Each day, participants received three short questionnaires that took between 5 and 10 min to complete. The first daily questionnaire was sent out every morning, before the start of the workday. This first questionnaire did not contain any variables of interest for the present study and is not considered further. The second daily questionnaire (and the first one of interest for the present study) was sent out at noon, around the time of the lunch break, and the last daily questionnaire was sent out every afternoon, around the time that the workday ended. Each survey was active for two hours. Participants were incentivized for participation in the baseline survey, for each daily entry, with a bonus for each complete day, and an additional bonus for ten complete days.

This procedure resulted in 20 possible observations of interest per participant (10 midday and 10 end-of-workday surveys). After excluding double entries, invalid entries, and daily entries that could not be matched with a respective baseline questionnaire, we obtained 2,408 daily records comprising midday and/or end-of-workday entries (out of 3,510 possible entries) from 351 participants. In order to be able to make meaningful predictions regarding the outcome variables of interest, we only included participants who had at least one day where both midday and end-of-workday measurements were present. This resulted in a final sample of 2,058 daily records from 244 participants (8.4 out of 10 possible daily records per participant).

Of the 244 participants, 63.1% were male and 36.9% were female. The mean age of the sample was 43.4 years (SD=13.0) and ranged between 19 and 73 years. More specifically, 47 participants were between 19 and 29 years, 49 were between 30 and 39 years, 59 were between 40 and 49 years, 61 were between 50 and 59 years, 25 were between 60 and 69 years, and 3 were 70 years and older. The majority of participants was English (85%), 5.7% were Scottish, 2.3% were Irish, and 7% indicated having another nationality (e.g., Indian, German, Dutch). In terms of education, 30% of the participants had a bachelor's degree, 14.2% had a master's degree, 14.1% had done some college, and 14% had a high school degree. The sample included a broad array of occupational sectors: 16.2% were working in manufacturing, 13.1% in customer service, 10.7% in education, 8% in health care, and 51.9% indicated other fields of work such as transportation, logistics, staffing, management, IT, consulting, and sales. Given that participants in the study were required to have a full-

time job the range of work hours was between 40 and 60 h per week. The study was approved by the ethical committee of the authors' research institution (approval number: pp-015-211).

Measures

SOC strategies. An adjusted version of the original 12-item SOC questionnaire (Baltes et al., 1999) was used to assess SOC strategy use during the morning and afternoon at work with three items for each strategy. Each item represented a particular SOC strategy that participants used "this morning at work" or "this afternoon at work". Thus, at lunch time, SOC strategy use during the morning hours was assessed retrospectively. At the end of the work day, SOC strategy use during the afternoon hours was assessed retrospectively. Thereby, we intended to capture a time period that is long enough to be able to engage in such strategies but brief enough to avoid memory bias. Sample items from the end-of-workday survey are: "This afternoon at work, I concentrated all my energy on a few things" (elective selection), "This afternoon, when things at work didn't go as well as they have in the past, I chose one or two important goals" (loss-based selection), "This afternoon at work, I kept working on what I had planned until I succeeded" (optimization), and "This afternoon, when things at work didn't go as well as they used to, I kept trying other ways until I achieved the same result I used to" (compensation). Items were rated on a 7- point scale ranging from 1 (strongly disagree) to 7 (strongly agree). The reliability estimates (McDonald's Omega; Geldhof et al., 2014) for the within-person level were 0.70/0.72 (morning/afternoon) for elective selection, 0.73/0.65 for loss-based selection, 0.82/0.81 for optimization, and 0.68/0.64 for compensation. For the between-person level, the respective estimates were 0.93/0.93, 0.90/0.92, 0.97/0.96, and 0.85/0.86.

Fatigue. Physical, cognitive, and emotional fatigue were assessed with one item each from the Three-Dimensional Work Fatigue Inventory (Frone & Tidwell, 2015). Per subscale, we chose the item with the highest factor loading. The 3D-WFI originally measures fatigue over the past 12 months. We adapted the items to match the current state of fatigue by changing the beginning of each item to "To what extent do you currently..." (see also Van Hooff et al., 2007). The three items are "To what extent do you currently feel physically worn out?" (physical fatigue), "To what extent do you currently feel mentally exhausted?" (cognitive fatigue), and "To what extent do you currently want to avoid anything that takes too much emotional energy?" (emotional fatigue). All questions were rated on a 5-point scale ranging from 1 (*not at all*) to 5 (*a great deal*) and were combined into one fatigue total score. The reliability estimates (McDonald's Omega) were 0.85/0.86 (morning/afternoon) for the within-person level and 0.96/0.96 for the between-person level.

Job satisfaction. We employed a single-item measure to assess job satisfaction as our study required very short daily surveys. Job satisfaction was assessed retrospectively for the previous hours. Thus, we adapted the validated item by Dolbier and colleagues (2005) by adding the words "this morning" or "this afternoon" (e.g., "Taking everything into consideration, how did you feel about your job as a whole this morning?") to fit the daily diary study design. The response scale ranged from 1 (*extremely dissatisfied*) to 7 (*extremely satisfied*).

Workload and job autonomy. Job demands and resources have often been associated with SOC strategy use in the past (e.g., Schmitt et al., 2012). SOC theory suggests that the use of the strategies helps to maintain effective functioning and well-being when demands are high and resources are low (Freund & Baltes, 2000). Therefore, we accounted for a commonly encountered demand and a crucial resource – workload and autonomy – in the analyses. *Workload* was assessed with one item from the Quantitative Workload Inventory by Spector & Jex (1998) and was adjusted to refer to the previous hours: "This morning/afternoon, there was a great deal to be done". *Autonomy* was assessed with one item from the Work Design Questionnaire (WDQ; Morgeson & Humphrey 2006) also adjusted to refer to the previous hours: "This morning/afternoon, my job allowed me to make a lot of decisions on my own".

Analytic Approach

To investigate within-day change in work fatigue and job satisfaction as a result of SOC strategy use, we adopted a multilevel modeling approach using Mplus 8.4 (Muthén & Muthén, 1998–2017). We modelled SOC strategies, fatigue, and job satisfaction (workload and autonomy) as Level-1 variables that were nested within participants (Level 2). We tested all hypotheses simultaneously using a multilevel structural equation modeling approach (see Fig. 2). At both levels, afternoon fatigue

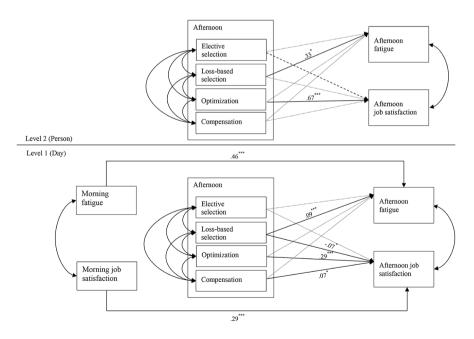


Fig. 2 Hypothesized model with resulting unstandardized coefficients. Dotted lines represent non-significant paths. For clarity, only significant coefficients are depicted and co-variance coefficients as well as covariates (morning levels of workload and autonomy) are omitted. *p < .05. **p < .01. ***p < .001

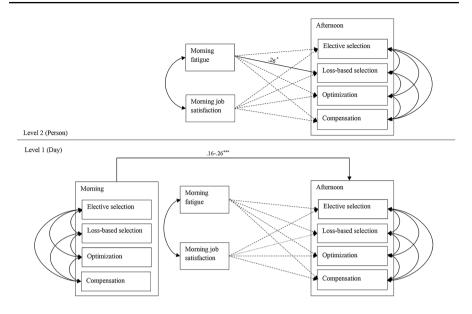


Fig. 3 Reversed-order analysis with resulting unstandardized coefficients. Dotted lines represent nonsignificant paths. For clarity, only significant coefficients are depicted and co-variance coefficients as well as covariates (morning levels of workload and autonomy) are omitted. *p < .05. **p < .01. ***p < .001

and job satisfaction were both predicted by afternoon SOC strategy use. At Level 1, we sought to partial out fluctuations in afternoon fatigue and job satisfaction that were due to different starting-levels of work fatigue and job satisfaction in the morning; we therefore statistically accounted for morning fatigue and job satisfaction, which were group-mean centered. In addition, to establish that SOC strategies predict our outcomes above and beyond job demands and resources, we accounted for morning levels of workload and autonomy both at the within- and between-person levels of analysis. At both levels, the two outcome variables were allowed to co-vary; the same was true for the predictor variables.

In the reversed-order analysis, work fatigue and job satisfaction measured at midday predicted SOC strategy use measured at the end of the workday at both levels (see Fig. 3). At Level 1, morning SOC strategy use was added as a covariate and centered around the group-mean. At both levels, workload and autonomy were accounted for, and the four SOC strategies as well as the set of predictor variables were allowed to co-vary.

Results

Preliminary Analyses

Table 1 depicts the means, standard deviations, and intercorrelations of the study variables. Furthermore, it provides the interclass-correlation coefficients (ICC) for

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17. Afternoon workload 5.32 1.	11 0.	48 0.		0.11 0.				0.38*** 0.0			4*** 0.47**		0.21**	0.58***	0.37*** 0.2		22**	- 0.25***
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11. Afternoon elective 4.88 0.84 0.38 0. selection 2.2 Afternoon loss- 4.10 0.97 0.50 - assed selection 5.38 0.88 0.47 0. 13. Afternoon 5.38 0.88 0.47 0. 13. Afternoon 5.38 0.88 0.47 0. 14. Afternoon 5.38 0.85 0.56 - 15. Afternoon 4.46 1.01 0.56 - 16. Afternoon 5.26 1.17 0.59 0. atisfaction 5.26 1.11 0.48 0. 17. Afternoon workload 5.32 1.01 0.55 0.		1.05 1.05 0.84 0.97 0.88 0.88 0.88 1.01 1.17 1.11 1.07	1.00 0.52 0.84 0.38 0.97 0.50 0.88 0.47 0.88 0.47 1.01 0.56 0.85 0.50 1.17 0.59 1.11 0.48 1.11 0.48 1.07 0.55	0.52 0.22 1.05 0.52 0.22 0.84 0.38 0.05 0.97 0.50 -0.09 0.88 0.47 0.17* 0.101 0.56 -0.11 1.01 0.56 -0.26*** 1.17 0.59 0.22*** 1.11 0.48 0.04 1.11 0.59 0.22*** 1.11 0.48 0.04 1.11 0.55 0.22*** 1.11 0.48 0.04	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1.05 0.22 0.20 0.26 0.25 0.22 0.49^{m} 0.49^{m} 1.05 0.52 0.22 0.00 0.76^{m} 0.10 0.55^{m} 0.41^{m} 0.49^{m} 0.49^{m} 0.84 0.38 0.05 0.02 0.56^{m} 0.81^{m} 0.53^{m} 0.41^{m} 0.49^{m} 0.49^{m} 0.97 0.02 0.02 0.36^{m} 0.81^{m} 0.53^{m} 0.41^{m} 0.49^{m} 0.49^{m 0.49^{m} 0.49^{m} 0.49^{m} 0.49^{m} 0.69^{m} 0.69^{m} 0.69^{m} 0.69^{m} 0.69^{m} 0.69^{m} 0.49^{m} 0.69^{m} 0.69^{m} 0.69^{m} 0.69^{m} 0.69^{m} 0.69^{m}	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$							

the day-level variables which were estimated in a null-model. As can be seen, the ICCs of our dependent variables ranged from 0.38 (afternoon elective selection) to 0.59 (afternoon job satisfaction). All in all, the ICCs confirm that there is sufficient within- and between-person variability in the day-level variables, justifying a multi-level approach.

Table 1 shows that at the between-person level (below the diagonal) aggregated morning measures of each SOC strategy correlated highly with the respective afternoon measure with correlations ranging from r=.95 to r=.97. However, at the within-person level, the correlations between each SOC strategy measured at midday and the respective end-of-workday measure were much lower, yet still significant, and ranged from r=.22 to r=.29. Furthermore, Table 1 provides some support for our classification of SOC strategies into preference-based strategies and loss-based strategies (see Fig. 1). The preference-based strategies of elective selection and optimization were relatively highly correlated, both at the person-level (r=.80, p <.001) and at the day-level (r=.49, p <.001). The loss-based strategies of loss-based selection and compensation were also highly correlated at the person-level (r=.78, p <.001) and moderately correlated at the day-level (r=.28, p <.001).

Given the high correlations between some SOC dimensions, we examined the factor structure of the daily survey items by conducting multilevel confirmatory factor analyses. Specifically, separately for the morning and afternoon SOC measures, we tested our 4-factor model (see Fig. 1) against (1) a 1-factor model in which all 12 items of the SOC questionnaire loaded onto a single common factor, (2) a 2-factor model in which selection-focused strategies (i.e., elective selection and loss-based selection) loaded on one factor and pursuit-focused strategies (i.e., optimization and compensation) loaded on another factor, and (3) a 2-factor model in which preference-based strategies (i.e., loss-based selection) loaded on another factor and optimization) loaded on another factor. Table 2 shows that these confirmatory factor analyses revealed the best model fit for the 4-factor model, so we retained this model for our hypothesis tests.

As a further check of the SOC factor model, we computed composite reliabilities (CR) as a measure of the factors' internal consistency, which ranged between 0.71 and 0.98 for the within-person factors (morning and afternoon) and between 0.99 and 0.99 for the between-person factors. Thus, all exceeded the threshold of 0.70 and were satisfactory. We also determined the average variance extracted (AVE) per factor as measure of convergent validity. The AVE values ranged between 0.48 and 0.95 for the within-person factors and between 0.96 and 0.98 for the between-person factors; with the exception of the AVE scores for the within-person elective selection factor (0.48 for both morning and afternoon), all exceeded the threshold of 0.50 for being satisfactory. Finally, we determined divergent validity by ensuring that each factor's maximum shared variance (MSV) is lower than that factor's AVE score. This was the case for all within- and between-person SOC factors at both morning and afternoon (MSV's ranged from 0.31 to 0.38 for within-person factors and from 69 to 0.81 for between-person factors).

								Satorra-Bentler comparison with 4-factor models	er comparise Is	on with
Model	X^{2}	df	d	CFI	RMSEA	SRMS within	SRMS between	Δ S-BX ² (df)	đf	d
Morning										
1-factor model	1874.450	108	0.001	0.527	0.101	0.155	0.517	1776.789	12	0.001
2-factor model: selection vs. pursuit	1383.654	107	0.001	0.658	0.087	0.145	0.669	1730.805	11	0.001
2-factor model: preference vs. loss	2161.381	107	0.001	0.450	0.110	0.100	0.110	346.393	11	0.001
4-factor model	260.479	96	0.001	0.956	0.033	0.032	0.088			
Afternoon										
1-factor model	1251.047	108	0.001	0.624	0.085	0.122	0.284	541.169	12	0.001
2-factor model: selection vs. pursuit	914.434	107	0.001	0.734	0.072	0.097	0.233	337.909	11	0.001
2-factor model: preference vs. loss	874.144	107	0.001	0.748	0.070	0.084	0.108	406.342	11	0.001
4-factor model	251.839	96	0.001	0.949	0.033	0.037	0.079			
<i>Note.</i> Level 1 $N_{Morning}$ = 1590. Level 2 $N_{Morning}$ = 244. Level 1 $N_{Afternoon}$ = 1459. Level 2 $N_{Afternoon}$ = 244. SOC = selection, optimization, compensiti index. RMSEA = root mean square error. SRMR = standardized root mean square residual. ΔS -B X^2 = Satorra-Bentler chi square difference test	$M_{orning} = 244.$ ror. SRMR=s	Level 1 A tandardiz	$I_{Afternoon} = 1^{2}$ ed root mea	159. Level 2 1 square re	$N_{Afternoon} =$ sidual. $\Delta S-B$	244. SOC = S	election, optin Bentler chi squ	$d_{orning} = 244$. Level 1 $N_{Afternoon} = 1459$. Level 2 $N_{Afternoon} = 244$. SOC=selection, optimization, compensation. CF1= comparative or. SRMR=standardized root mean square residual. $\Delta S-BX^2 = Satorra-Bentler$ chi square difference test	ısation. CFI st	= comparative

 Table 2
 Goodness-of-fit Indicators for Multilevel Confirmatory Factor Analysis of SOC Strategy Use During Morning and Afternoon

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	Afternoon fat	igue		Afternoon jo	b satisfacti	on
	В	SE	р	В	SE	р
Within-person level						
Elective selection	-0.004	0.025	0.860	0.018	0.029	0.542
Loss-based selection	0.085^{***}	0.025	0.001	-0.067^{*}	0.029	0.021
Optimization	-0.050	0.028	0.076	0.285^{***}	0.033	0.001
Compensation	0.002	0.027	0.935	0.067^*	0.032	0.035
Morning fatigue/ satisfaction	0.461***	0.034	0.001	0.292^{***}	0.031	0.001
Workload	-0.013	0.028	0.571	0.009	0.027	0.733
Autonomy	0.027	0.028	0.328	0.021	0.032	0.516
Residual variance	0.474^{***}	0.020	0.001	0.637^{***}	0.027	0.001
Between-person level						
Elective selection	-0.353	0.191	0.064	-0.014	0.240	0.954
Loss-based selection	0.325^{*}	0.138	0.018	0.037	0.173	0.829
Optimization	-0.033	0.184	0.856	0.673**	0.231	0.004
Compensation	-0.060	0.142	0.673	-0.147	0.178	0.410
Workload	0.270^{**}	0.087	0.002	-0.086	0.107	0.424
Autonomy	-0.047	0.089	0.595	0.146	0.110	0.183
Residual variance	0.471***	0.056	0.001	0.794^{***}	0.094	0.001

 Table 3 Unstandardized Coefficients from MSEM Predicting Afternoon Fatigue and Job Satisfaction

Note. Level 1 *N*=1935. Level 2 *N*=244. MSEM=Multilevel structural equation modelling. **p*<.05. ** *p*<.01. *** *p*<.001

Hypotheses Testing

Figure 2 depicts a summary of the tested hypotheses and the way these hypotheses were modelled in Mplus. Based on commonly used cutoff scores (Byrne, 2011), we conclude that the model achieved satisfactory fit (X^2 =34.29, df=2, p<.001; RMSEA=0.091; CFI=0.987; SRMR for within =0.022, between =0.005).

Hypothesis 1 suggests that, at the within-person level and accounting for previous work fatigue levels, (a) elective selection and (b) loss-based selection (i.e., selection-focused strategies) are related to decreased fatigue, whereas (c) optimization and (d) compensation (i.e., pursuit-focused strategies) are related to increased work fatigue at the end of the work day. As can be seen in Table 3, at both the within-person level (B=0.09, p < .001) and the between-person level, the use of loss-based selection in the afternoon was the only strategy that was related to work fatigue (B=0.33, p=.018), and this relationship was unexpectedly *positive*. Hence, we found no empirical support for *Hypotheses 1a-d*.

Hypothesis 2 suggests that, at the within-person level and accounting for previous satisfaction levels, (a) elective selection and (b) optimization (i.e., preference-based strategies) are related to increased job satisfaction, whereas (c) loss-based selection and (d) compensation (i.e., loss-based strategies) are related to decreased job satisfaction at the end of a workday. Table 3 reveals that we found some empirical support for these hypotheses. That is, there is a positive relationship between optimization in the afternoon and job satisfaction (Hypothesis 2b; B=0.29, p<.001) and a nega-

tive link between loss-based selection and job satisfaction (Hypothesis 2c; B = -0.07, p = .021). Also at the between-person level, optimization was positively related to job satisfaction (B = 0.67, p = .004). Unexpectedly, at the within-person level, the use of compensation was *positively* related to job satisfaction (B = 0.07, p = .035).

Supplementary Analysis: Reversed Temporal Order

The focus of the present study was on the effects of using SOC strategies on withinday change in work fatigue and job satisfaction. However, as discussed, the reverse relationships might also be true. Therefore, we tested a model where afternoon SOC strategy use is predicted by morning levels of work fatigue and job satisfaction, as well as workload and autonomy. As in the previous analyses, we modeled the same model on both levels, controlling for morning SOC use at the within-person level. Figure 2 depicts a summary of the supplementary analysis (note that paths for workload and autonomy are omitted for ease of presentation); this model also achieved satisfactory fit (X^2 =51.69, df=12, p<.001; RMSEA=0.041; CFI=0.989; SRMR for within =0.025, between =0.005).

As can be seen in Table 4, at the between-person level, a person's average level of morning fatigue was related to the use of only one loss-based strategy, namely loss-based selection (B=0.26, p=.043). A person's average level of job satisfaction was not related to any of the four SOC strategies. At the within-person level, all paths for work fatigue and job satisfaction were non-significant, providing no evidence that morning levels of occupational well-being drive within-day changes in SOC strategy use.

Discussion

The goal of this study was to shed light on SOC strategy use at work as a dynamic process and investigate relationships between the use of specific SOC strategies and changes in work fatigue and job satisfaction across a workday. We conducted a daily diary study over ten consecutive workdays and argued that selection-focused strategies are negatively related to subsequent levels of work fatigue because they help to distribute resources adaptively while pursuit-focused strategies are positively related to work fatigue because they require resource investment. Moreover, we proposed that preference-based strategies positively predict job satisfaction while loss-based strategies negatively predict job satisfaction because one has to deviate from an initial, preferred goal or pursuit strategy.

Our results show that only the strategy of loss-based selection is related to end-ofworkday fatigue and this relationship also holds at the between-person level. However, the nature of this relationship is opposed to what we hypothesized, namely, loss-based selection predicted higher (not lower) levels of work fatigue at the end of the workday, and at a general level. Arguments from a study by Gross and colleagues (2011) may help explain our finding. The study found positive relationships between negative daily work events and after-work fatigue. Among the reported negative

Table 4 Unstandardized Coefficients from MSEM Predicting Afternoon SOC Strategy Use in Exploratory Analyses in the Reversed Temporal Order	ficients from MS	EM Predic	ting Aftern	toon SOC Stra	ttegy Use in	Explorato	ry Analyses in	the Rever	sed Tempor	al Order.		
	Afternoon			Afternoon			Afternoon			Afternoon		
	Elective selection	tion		Loss-based selection	election		Optimization			Compensation	-	
Variable	В	SE	р	В	SE	р	В	SE	р	В	SE	р
Within-person level										-		
Work fatigue	0.018	0.047	0.701	0.052	0.047	0.265	-0.038	0.043	0.381	0.008	0.043	0.844
Job satisfaction	0.050	0.038	0.188	0.062	0.037	0.097	0.049	0.035	0.163	0.042	0.034	0.223
Morning SOC strategy use	0.170^{***}	0.029	0.001	0.156^{***}	0.028	0.001	0.258^{***}	0.032	0.001	0.162^{***}	0.028	0.001
Workload	0.031	0.029	0.287	0.023	0.029	0.432	-0.017	0.027	0.535	0.032	0.027	0.233
Autonomy	0.078^{*}	0.034	0.024	0.123^{***}	0.034	0.001	0.024	0.031	0.440	0.010	0.031	0.744
Residual variance	0.816^{***}	0.033	0.001	0.729^{***}	0.030	0.001	0.648^{***}	0.027	0.001	0.644^{***}	0.026	0.001
Between-person level												
Work fatigue	-0.145	0.097	0.135	0.256^{*}	0.126	0.043	-0.135	0.094	0.151	0.143	0.124	0.247
Job satisfaction	0.080	0.065	0.221	0.084	0.085	0.322	0.121	0.064	0.058	0.071	0.083	0.392
Workload	0.293^{***}	0.061	0.001	0.299^{***}	0.080	0.001	0.345^{***}	0.060	0.001	0.529^{***}	0.079	0.001
Autonomy	0.138^{*}	0.065	0.034	-0.121	0.085	0.156	0.231^{***}	0.064	0.001	-0.236^{**}	0.083	0.004
Residual variance	0.313^{***}	0.045	0.001	0.662^{***}	0.076	0.001	0.294^{***}	0.042	0.001	0.620^{***}	0.074	0.001
Note. Level 1 N=1935; Level 2 N=244. MSEM=Multilevel structural equation modelling. $*p < .05$. $** p < .01$. $*** p < .001$	2 <i>N</i> =244. MSE	M=Multi	evel struc	tural equation	modelling	* <i>p</i> <.05. *	* <i>p</i> <.01. ***	<i>p</i> <.001				

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events were time shortage or the loss of the personal workspace. In accordance with SOC theory, these negative events can be defined as resource losses that require the use of loss-based selection. It is possible that those negative events that constitute resource losses lead to emotion-regulatory processes which are tiring in and of themselves, thus overlaying any resource-saving benefits from loss-based selection. Our study and the study by Gross and colleagues (2011) both lend support to the idea that the loss of work-relevant resources can result in increased fatigue levels. What remains unclear is whether the increased afternoon fatigue levels should be attributed to the negative affectivity and associated emotion-regulatory efforts when facing resource losses, or whether they should rather be attributed to the constant need to reorganize goal hierarchies.

Regarding elective selection, optimization, and compensation, the present study could not confirm any significant associations with work fatigue on either level of analysis. Similarly, Schmitt and colleagues (2012) also did not find a significant relationship between SOC strategy use and work fatigue (though without controlling for morning levels of fatigue). It could be argued that work fatigue is a result of high workload rather than action-regulation strategies. Interestingly, while workload was related to increased levels of work fatigue at the between-person level, there was no significant relationship at the daily level in our study. These results may suggest that the average experience of high workload predicts overall higher work fatigue levels.

Regarding job satisfaction, findings were more in line with expectations, though not completely. We partly confirmed hypotheses by showing that the use of optimization (Hypothesis 2b) is indeed positively related to afternoon job satisfaction (at both the within-person and between-person levels), whereas the use of loss-based selection (Hypothesis 2c) is negatively related to afternoon job satisfaction (though only at the within-person level). These findings suggest that the act of pursuing one's goals and investing resources in goal-achievement - as in optimization - contributes to employee well-being both in the short and long-term. In contrast, the use of lossbased selection may reduce satisfaction in the short-term but - consistent with SOC theory – may not have any harmful effects in the long run. According to goal-setting theory (Locke & Latham, 2002), selecting goals based on one's personal preference, but regardless of whether one is actually able to achieve them or not (i.e., elective selection), and without engaging in any kind of goal-pursuit, should not evoke strong positive nor negative feelings. This is because goal-achievement - and not goalsetting – is the determinant of satisfaction with selected goals. However, the act of having to select new goals because the previously selected goals are not achievable anymore (i.e., loss-based selection) implies a failure in goal-achievement which in turn results in lower levels of satisfaction or even dissatisfaction at least in the shortterm. When used chronically, neither elective selection nor loss-based selection affect job satisfaction, implying that there is no harm in engaging in a loss-based selection strategy.

Interestingly, and opposed to our hypotheses, we found a positive relationship between the use of compensation in the afternoon and within-day change in job satisfaction (though no such relationship existed at the between-person level). This is surprising considering the loss-driven nature of compensation. However, a closer look at the aim of this strategy – goal-pursuit – can explain why a loss-driven strategy is associated with beneficial well-being outcomes in the short-term. SOC and goal-setting theories both postulate that achieving one's goals fosters feelings of satisfaction (Freund & Baltes, 2000; Locke & Latham, 2002). Goal-setting theory suggests that goals serve as the reference point for satisfaction vs. dissatisfaction and goal-achievement is considered as the determinant of satisfaction with selected goals (Locke & Latham, 2002). The strategy of compensation is - despite its loss-based nature – a way of achieving one's previously selected goals, hence a first step toward goal-achievement. We assume that the mere act of engaging in goal-pursuit already makes goal-achievement a way more probable outcome which could explain why goal-pursuit - regardless of the loss-driven nature - is associated with short-term increases in job satisfaction. Interestingly, our results showed that the habitual use of compensation is not significantly associated with well-being in either positive or negative ways. This might be partly due to the idea that compensation, despite the preceding resource losses, helps to get things done. The positive feelings of achieving a goal and the negative feelings of losing resources might cancel each other out and lead to a neither positive nor negative association between habitual compensation and well-being outcomes.

Although our basic assumptions were that SOC strategies affect well-being at work, we also tested a reversed temporal-order model in which SOC strategy use in the afternoon hours is predicted by well-being indicators (fatigue and satisfaction) during the morning hours. Again, we also controlled for workload and job autonomy during the morning hours. The results of these analyses did not support the assumption that SOC strategy use is affected by work fatigue or job satisfaction at the withinperson level. At the between-person level, the strategy of loss-based selection during the afternoon hours was predicted by work fatigue levels around noon while job satisfaction did not predict any of the SOC strategies. It is possible that employees who experience more work fatigue might need to rearrange their goal hierarchies more often – hence engage in more loss-based selection – because their energy levels do not allow them to pursue their work goals as planned. Hence, higher work fatigue levels seem to only leave sufficient energy to engage in loss-based strategies, but do not allow for the active engagement in preference-based strategies such as goal-selection and goal-pursuit.

Interestingly, the control variables workload and autonomy accounted for some variation in SOC strategy use during the day. Specifically, at the within-person level autonomy predicted increased use of the two goal selection strategies (elective selection and loss-based selection). These results imply that the freedom to make decisions mostly reflects in the selection of employees' daily goals and not so much in the way they want to pursue those goals. However, at the between-person level, the average experience of autonomy does not predict average loss-based selection, although it does positively predict elective selection and the goal pursuit strategies of optimization and compensation. These results fit prior cross-sectional studies associating autonomy with higher SOC strategy use (Moghimi et al., 2017). Finally, a somewhat counterintuitive pattern was observed for workload which was positively related to all SOC strategies on the between-person level, implying that higher workload generally requires more action-regulation strategies. These findings are also consistent

with SOC theory, which states that high demands require the use of SOC strategies (Freund & Baltes, 2000).

Theoretical and Practical Implications

The current study supports a more dynamic account of action regulation and wellbeing at work by establishing fluctuations in the use of SOC strategies that predict within-day changes in job satisfaction and fatigue. As associations may differ in meaningful ways across within- and between-person levels (Zacher & Rudolph, 2020), this approach clearly adds to previous research that mostly considered the effects of SOC strategies on well-being outcomes at the between-person level. We found that there are indeed differences in within-person SOC (where loss-based selection was a negative predictor of subsequent levels of job satisfaction) and between-person SOC (where loss-based selection was unrelated to job satisfaction). Thus, our findings suggest that theory development on SOC at work should take multiple conceptual and analytical levels into account.

Additionally, this study shows that it is useful to distinguish strategies that are directed at selection vs. pursuit and loss vs. preference in the work setting, as such distinctions allow to test specific hypotheses about differential effects of the four strategies. Although not all results followed initial predictions, we found that there are indeed differences between the four strategies' consequences: Loss-based selection appears as a rather maladaptive strategy as it leads to increased work fatigue on the daily and person-level. Pursuit-focused strategies, thus compensation and optimization, are beneficial strategies when it comes to daily job satisfaction, but compensation does not affect job satisfaction when it is used as a habitual strategy. By uncovering these differential patterns, our results can help to explain previous meta-analytic zero relationships between overall SOC strategy use and occupational outcomes such as strain (Moghimi et al., 2017).

Our study further presents a number of practical implications that can help employers and employees understand and react to daily fluctuations in occupational well-being. In the present study we showed that such fluctuations can be affected by certain SOC strategies and workload and autonomy. This insight can be used to develop interventions and training to increase occupational well-being. Existing attempts to develop SOC-trainings in the workplace (Müller et al., 2016) show that SOC strategies can be successfully trained. The knowledge from the present study (i.e., robust associations between optimization and job satisfaction at both levels) can aid in the development of future training. For instance, training could focus on teaching employees the specific skill sets that they need to optimize the pursuit of their work goals.

The results further help to derive specific actions that employers and employees can undertake in order to ensure job satisfaction. First, employers and organizations could benefit from providing low-threshold possibilities for employees to indicate when they are encountering situational constraints to their goal attainment and performance. Our results reveal that in the short-term, pursuit strategies (i.e., optimization and compensation) are associated with job satisfaction regardless of the loss- or preference-based nature. Thus, loss of daily resources may lead to lower functioning only if employees cannot, or do not want to, access compensatory means. Both employers and employees can play an important role in improving occupational wellbeing. Providing the means for goal-pursuit and eventually goal-achievement can help employees engage in optimization and compensation strategies and by doing so, improve their occupational well-being. In order to provide these means, employers need to be aware that employees are experiencing constraints. Mentioning these constraints must be possible without any negative consequences with the only goal to improve occupational well-being and as a result of that, performance. Based on our results, we recommend that employers provide a work environment where employees have access to all necessary means for goal and task achievement. Additionally, we recommend that employees proactively seek the necessary means that they need to achieve their work goals, for instance in form of job crafting (Rudolph et al. 2017).

Limitations and Future Directions

One limitation of this study is that we focused on only two occupational well-being indicators and only two demands and resources while there are many more indicators beyond work fatigue and job satisfaction or autonomy and workload, respectively. In this sense, the present study can be considered as a starting point for future studies. While workload and autonomy have been shown to be important predictors of SOC strategy use (Moghimi et al., 2017), SOC theory states that high demands and low resources might affect SOC strategy use but does not specify which exact demands and resources should be considered (Freund & Baltes, 2000). Future research should include more occupational well-being outcomes and more kinds of job demands and resources in order to get a better picture of SOC-facilitators and SOC-barriers.

Our study also suggests avenues for future research. One fruitful direction is to investigate which specific aspect of loss-based selection leads to negative outcomes for employees. We showed that the use of loss-based selection is associated with lower levels of job satisfaction and higher levels of work fatigue. It remains unclear which mechanisms underlie these relationships. Future research should investigate whether it is the act of reorganizing goals or the preceding loss of a resource that causes the increased work fatigue levels at the end of the workday.

Conclusions

Within-day fluctuations of occupational well-being are at least partly due to employees' use of the action-regulation strategies of selection, optimization, compensation. Our results indicate that within-day change in work fatigue may be mainly driven by the use of daily loss-based selection. Within-day change in satisfaction, in contrast, may be driven by optimization and compensation which lead to increased satisfaction levels, and by loss-based selection which leads to decreased job satisfaction levels. Additionally, analyses testing the reversed temporal order between our study variables suggested that daily occupational well-being barely affects SOC strategy use at either level while workload and autonomy are strongly related to SOC use on the between-person level. These results show that it is important to acknowledge the different motivational drivers that precede the use of each individual SOC strategy. Overall, the current study provides an important theoretical contribution by showing that it is useful to distinguish selection- and pursuit-focused strategies as well as loss- and preference-based strategies. This insight could be used by practitioners to optimize training programs or job crafting initiatives.

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Availability of Data and Material Data has not been made public.

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Declarations

Conflicts of Interest/Competing Interests On behalf of all authors, the corresponding author states that there is no conflict of interest.

Ethics Approval The study was approved by the ethical committee of the authors' research institution (approval number: pp-015-211).

Consent to Participate All participants have signed an informed consent.

Consent for Publication All authors consent with the publication of the submitted manuscript. The submitted manuscript has not been published in any other journals.

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