



Predicting well-being at work during Covid-19: Examining the incremental validity of core self-evaluations and the mediating effect of perceived strengths use

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Abstract: The Covid-19 pandemic affected work dynamics across economies, creating a need to map which individual and job-related resources organizations should rely on to support their workforce in dealing with challenging job demands, while preserving positive levels of performance and well-being. The current study is carried out with this purpose and empirically tests whether core self-evaluations play a relevant role over proactive personality in predicting occupational well-being, operationalized through thriving at work. Results from a sample of $N = 94$ incumbents from different jobs and organizations, surveyed during the fourth wave of the pandemic, revealed that core self-evaluations yield a significant contribution to predicting thriving, over proactive personality. Mediation analyses showed that core self-evaluations impact upon this criterion via perceived strengths use, both directly and indirectly, when the effects of proactive personality are accounted for. Major implications for human resources management in the Covid-19 pandemic and analogous work crises are discussed.

Keywords: Core self-evaluations; Proactive personality; Thriving; Well-being; Mediation.

The prediction of optimal job performance and personal well-being is a key research goal across the personnel and organizational psychology literature (Campbell & Wiernik, 2015; Hogan, 2020). This goal applies to regular work situations, as well as to extraordinary organizational hardship and crisis situations, like those elicited by the current pandemic (Kniffin et al., 2021; Yi-Feng Chen et al., 2021). Indeed, Covid-19 abruptly brought about work turbulence on an unprecedented scale, particularly by increasing the need to effectively perform while working from home and to accomplish work goals under virtual leadership and communication.

Recent research carried out in the scope of the job demands-resources model (Bakker & Demerouti, 2017) and the conservation of resources theory (Hobfoll et al., 2018), has shown that securing and optimizing personal and job-related resources plays a critical role in fostering performance and sustaining well-being in face of challenging job demands, like those triggered by the pandemic (Yi-Feng Chen et al., 2021). In the scope of personal resources, emphasis has been placed upon trait-level constructs, like proactive personality, due to their role in actively securing motivational job-related resources, through individual strengths enactment, to cope with work uncertainty and adversity during Covid-19 (Bakker et al., 2019; Yi-Feng Chen et al., 2021). Specifically, proactive personality entails the individual tendency to show initiative in enacting positive environmental change to achieve goals, despite situational difficulties and obstacles (Bateman & Crant, 1993; Crant et al., 2017). Due to its dispositional inclination to improve their work situation, more proactive employees are posited to show an agentic approach towards adverse work situations, like those involved in the Covid-19 pandemic, by actively looking for better ways to perform and accomplish their work goals, persevering in face of emerged constraints and turbulence (Yi-Feng Chen et al., 2021).

The current study was carried out in view of this emphasis in the literature on the relevance of trait-like constructs as key personal resources favouring the employee's adaptative regulation in dealing with work demands and, ultimately, the attainment of higher-level levels of performance and well-being (Bakker & Demerouti, 2017; Bipp et al., 2019; Chang et al., 2012). In particular, it answers the recent call by Yi-Feng Chen et al. (2021) to empirically test whether another theoretically relevant personal disposition (i.e., core self-evaluations, CSE), can incrementally contribute to predict psychological well-being, over proactive personality, in this work crisis context (Bakker & Demerouti, 2017; Hobfoll et al., 2018; Yan et al., 2019).

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This higher-order personality construct refers to the “fundamental premises that individuals hold about themselves and their functioning in the world” (Judge et al., 2005, p. 168). As such, it is posited as a relevant indicator of the extent to which someone holds enduring positive self-regard, based on high levels of self-efficacy, self-esteem, internal self-control and emotional stability (Judge et al., 2003). Hence, unlike proactive personality, which is focused on the individual predisposition in bringing about constructive change at work to accomplish important goals (Crant et al., 2017), including in the context of Covid-19, CSE captures the employee’s enduring sense of self-assurance, agency and emotional adjustment, which is key in promoting effective performance and enhanced well-being at work (Chang et al., 2012; Judge et al., 2003).

As further developed in the section below, there are theoretical and empirical reasons supporting this meaningful role of CSE, non-redundant with proactive personality, in driving psychological well-being in the organizations in the frame of the Covid-19 pandemic (Chang et al., 2012; Yan et al., 2019; Yi-Feng Chen et al., 2021). Yet, to the best of our knowledge, this is the first study to assess its incremental validity over proactive personality. Indeed, the literature is uninformative about whether each of these dispositional predictors yields a significant contribution to explaining this criterion’s variance, when the effects of the other are also considered (Yi-Feng Chen et al., 2021). Still, addressing this question is paramount from a human resources management perspective, specifically to conclude whether organizations should focus on just one of these employee’s traits, i.e. proactive personality or CSE, or alternatively if both should be appraised for building a workforce with stronger personal resources to sustain positive levels psychological well-being, even in the face of uncertain and stressful situations, such as those caused by the pandemic.

Furthermore, by adopting the propositions of the job demands-resources model (Bakker & Demerouti, 2017), this study also intends to contribute to related theory building by shedding light on the motivational mechanisms underpinning the influence of trait-like personal resources on well-being (Bipp et al., 2019; Yan et al., 2019). Specifically, the current study draws upon the evidence reported by Yi-Feng Chen et al. (2021), which supports that proactive personality enhances well-being by enacting more favourable perceptions of individual strengths use. It thus proposes that CSE will likewise yield a relevant and independent contribution in mobilizing such individual strengths, to nurture well-being at work during Covid-19. To fulfil these aims, this study follows related research and adopts the conceptualization of well-being through the construct of thriving at work, since it captures the experience of personal growth and enhanced functioning, marked by a joint sense of continuous learning and vitality which is particularly relevant in adverse situations such as Covid-19 work hardship (Porath et al., 2012; Spreitzer et al., 2005; Yi-Feng Chen et al., 2021).

Incremental validity of CSE, over proactive personality, for predicting well-being

According to the demands-resources model, proactive personality and CSE constitute two specific personal resources which play a role in enhancing performance and well-being at work (Bakker & Demerouti, 2017; Yan et al., 2019). As noted, proactive personality refers to a disposition to take initiative and persist to enact positive change in the environment and facilitate goal achievement, despite situational constraints (Bateman & Crant, 1993). CSE, on the other hand, entails a higher-order personality trait capturing individuals’ appraisals of their self-worth, agency, and capabilities, which manifests in levels of self-esteem, self-efficacy, internal locus of control and emotional stability (Judge et al., 2003).

Empirical research has supported the merits of both these trait-like resources, albeit to a lesser extent for proactive personality, for predicting extant operationalizations of well-being in the workplace, including job satisfaction (Hsieh et al., 2019; Lemelle & Scielzo, 2012; Spitzmuller et al., 2015), life satisfaction and positive affect (Extremera & Rey, 2018; Hsieh & Huang, 2017; Judge et al., 2005), as well as thriving at work (Kleine et al., 2019). Taking the latter conceptualization, Yi-Feng Chen et al. (2021) recently showed that proactive personality predicts thriving at work in the Covid-19 context, after theorizing that more proactive individuals cope effectively with uncertainty and work disruption provoked by the pandemic, due to their active self-directness and persistence in looking for solutions and improved ways of working. Building upon these contributions, we posit that CSE will also play a relevant contribution, non-redundant with proactive personality, to foster individual well-being, measured as thriving, in this work crisis scenario.

As highlighted by Bakker and Demerouti (2017), “Individuals who are high in optimism and self-efficacy believe that good things will happen to them, and that they are capable to handle unforeseen events” (p. 3). Individuals with high CSE are characterized as possessing such instrumental psychological resources (see Hobfoll et al., 2018 for a review), i.e., a strong sense of agency and self-assurance. We thus contend that they will be more effective in dealing with uncertainty and challenging pandemic-related demands at work, by experiencing greater learning and vitality, ultimately benefiting from enhanced levels

of thriving (i.e., well-being; Judge et al., 2003; Kleine et al., 2019). Furthermore, unlike proactive personality, CSE specifically captures a broader set of psychological resources, i.e., general self-efficacy, self-esteem, emotional stability and internal locus of control, which are likely to play a critical role in thriving throughout stressful and demanding work situations, across organisations, like those caused by the pandemic (Judge & Kammeyer-Mueller, 2011; Judge et al., 2003). Due to their enhanced self-esteem and emotional stability, employees with high CSE tend to mitigate detrimental emotional effects elicited by adverse work events and negative feedback, preventing their attribution as personal failings and precluding their negative impact upon this criterion's underlying subdimensions of learning and vitality (Colbert et al., 2004; Judge et al., 2003; Kleine et al., 2019). Capitalizing upon positive self-regard and emotional stability, along with a stronger sense of agency and internal control, employees with high CSE are predisposed to face challenging work demands, such as those stimulated by the pandemic, with self-determination and motivation to learn, instead of experiencing hopelessness and passivity (Judge et al., 2003; Naquin & Holton, 2002). Meta-analytic research is consistent with this rationale by showing that CSE represents a meaningful antecedent of thriving at work, reporting a strong effect size ($\rho = .50$, $k = 6$, $N = 2.142$) for the corresponding link between these constructs (Kleine et al., 2019). Thus, considering these conceptual and empirical aspects we hypothesize that:

Hypothesis 1. CSE is positively related to thriving at work and shows incremental validity to predict this criterion and its dimensions, over proactive personality.

Mediating role of perceived strengths on the link between CSE and well-being

Conservation of resources theory (Hobfoll et al., 2018) postulates that individuals are driven to acquire, retain and enhance their resources, such self-esteem and self-efficacy, to prosper in life and successfully cope with objectively stressful events. Such acquisition and preservation of resources for times of need grants individuals with a sense that they are capable of overcoming challenging, uncertain and crisis situations, such those prompted by the Covid-19 at work, making them less vulnerable to resource loss and, simultaneously, more competent at gaining further resources. Drawing upon these assumptions, Yi-Feng Chen et al. (2021) argued that more proactive individuals, due to their tendency to act with self-directness to reduce uncertainty by enacting change and anticipating solutions, will become more effective in sustaining their resources to deal with a crisis such as Covid-19, as well as to acquire additional resources in the workplace. Specifically, it is posited that such individuals will attain more job-related motivational resources and benefit from their impetus in driving performance and well-being, because they will perceive themselves as more capable of using their strengths (Bakker & van Woerkom, 2018). This construct of strengths use is rooted in positive psychology and developed from the contributions of Seligman and colleagues (Seligman et al., 2005), emphasizing that employees' optimal functioning and performance is dependent upon the mobilization and improvement of individual strengths (i.e., the development and use of their talents and capabilities at work).

As previously highlighted, both proactive personality and CSE are theorized as personal resources by the job-demands resources model, which further postulates that they influence distal work outcomes (i.e., performance and well-being) through work-related motivational mechanisms (Bakker & Demerouti, 2017). Perceived strengths use comprises an example of these mechanisms and is posited to be impacted by personality and job resources (Bakker et al., 2019; Bakker & van Woerkom, 2018). Yi-Feng Chen et al. (2021) report evidence from a sample of doctors and nurses working at a Covid-19 hospital, supporting the mediating effect of perceived strengths use on the link between proactive personality and well-being, operationalized as thriving. Still, we argue that CSE represents another relevant disposition that will exert influence in enhancing thriving at work through this motivational mechanism, even when the effects of proactive personality are also considered. This proposition relies upon the rationale that these two dispositions entail relevant, yet non-equivalent, personal resources which will facilitate thriving in the workplace, through their instrumentality in activating and mobilizing the individual's strengths (Bakker & Demerouti, 2017; Bakker & van Woerkom, 2018).

Proactive personality is posited to elicit a positive perception of employees about their readiness to use their strengths by enhancing individual willingness to take the initiative to positively shape the organizational environment and look for better ways of attaining work goals (Bateman & Crant, 1993). CSE predisposes individuals to mobilize their strengths through a sense of positive self-regard anchored in self-confidence, internal locus of control and emotional stability in face of adversity (Judge & Kammeyer-Mueller, 2011; Judge et al., 2003). Thus, we expect that CSE will exert a positive impact on thriving in a Covid-19 work scenario via its positive influence on strengths use, even when the influence of proactive personality is also accounted for. Therefore, we hypothesize that:

Hypothesis 2. The link between CSE and thriving is mediated by strengths use.

METHOD

Procedure and participants

The present study was developed using a cross-sectional design, implemented from May to July of 2021, when Portugal was facing the fourth wave of the Covid-19 pandemic. Data was collected from a convenience sample of Portuguese employees using an on-line questionnaire shared on the LinkedIn social network. Participants were instructed to complete the questionnaire after providing their informed consent, emphasizing the anonymity and confidentiality of all reported data and their exclusive use for research. In total, 94 valid questionnaires were obtained, corresponding to 69% of female employees and 31% male employees, with an average age of 36.7 years ($SD = 10.8$) and a mean of 9.4 years ($SD = 10.6$) of organizational tenure. Most employees have completed higher education (60.6%), with 31.9% holding a master's degree and 28.7% a bachelor's degree, followed by 30.9% with secondary education and the remaining 8.5% who have completed basic education. Participants belong to a wide range of organizations and occupational groups, namely management and administration (22.3%), sales and customer service (12.8%), healthcare (3.2%), clerical workers (12.8%), professionals (38.2%) i.e., teachers, accountants, lawyers, engineers, consultants, as well as skilled and semiskilled workers (10.7%) like mechanics and operational assistants. In total, 59.6% of the participants were employed in the private sector and 37.2% in the public sector, while 3.2% did not provide this information. At the time of data collection, most of the incumbents were working on-site (78.7%), while 11.7% were working from home and 9.6% did not specify this aspect.

Measures

All measures included in the employee survey were administered in Portuguese, as detailed below. To the best of our knowledge, unlike proactive personality and CSE, a Portuguese form of the scales selected (following Yi-Feng Chen et al.'s, 2021 procedure) to measure perceived strengths use (Keenan & Mostert, 2013) and occupational well-being, operationalized through individual thriving (Porath et al., 2012) was not available in previous literature. Thus, prior to data collection, the original versions of these scales in English were translated into Portuguese, following translation-back translation procedures (Brislin, 1986).

Core self-evaluations. This variable was assessed with the Portuguese form of Judge et al.'s (2003) CSE scale, developed by Martins et al. (2015). It consists of 12 items (e.g., "Overall, I am satisfied with myself), self-rated on a 7-point Likert scale, anchored at 1 = *strongly disagree* and 7 = *strongly agree*. A component factor analysis supported the use of the total score on the scale as an unitary dispositional representation of the individual's core assessments of their self (Judge et al., 2003), by uncovering a single component accounting for 39.10% of total variance. All items showed appropriate loadings, ranging from .76 to .42, with the exception of items 3 (i.e., "When I try, I generally succeed") and 9 (i.e., "I determine what will happen in my life") which were, consequently, dropped from the analysis. Cronbach's alpha was .82.

Proactive personality. The Portuguese version of Bateman and Crant's (1993) 10-item scale developed by Rodrigues and Rebelo (2013) was used to measure this personality construct. A sample item is "If I see something I don't like, I fix it". The response options ranged from 1 = *strongly disagree* to 7 = *strongly agree*. Consistent with extant literature, results from a principal components analysis supported this scale's unidimensionality, with all items showing acceptable loadings (i.e., from .81 to .53) on the extracted component, which accounted for 52.10% of total variance. Cronbach's alpha was .89.

Perceived strengths use. This variable was measured through the same procedure adopted by Yi-Feng Chen et al. (2021) and consisted of using Keenan and Mostert's (2013) eight-item scale of perceived organizational support for strengths use (POSSU) with small modifications of items to focus on individual strengths use in the face of the Covid-19 situation. A sample item is "In my work and since the pandemic outbreak, I do my job in a manner that suits my strong points". Employees provided their answers in all measures using a 7-point Likert scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*. As expected, a principal component analysis uncovered a single component solution explaining 75.05% of total variance, with respective items loadings ranging from .91 to .81. Cronbach's alpha was .95.

Thriving at work. Porath et al.'s (2012) 10-item scale was adopted to appraise thriving in the workplace. It includes five items for each of its two dimensions (i.e., learning; e.g., "I see myself continually improving") and vitality (e.g. "I have energy and spirit"). Following Yi-Feng Chen et al. (2021), the lead-in "In my work until now since the pandemic outbreak,..." was added to scale's instructions to frame all items to the work context during the pandemic. Incumbents provide their ratings using a 7-point Likert scale anchored at 1

= *strongly disagree* and 7 = *strongly agree*. A principal components analysis with oblimin rotation to account for expected dimensions' inter-relation provided empirical support for a two-component solution, explaining 68.52% of overall variance. A pattern of clean and appropriate item loadings on the respective component was obtained, ranging from .90 to .47 for learning and from .95 to .62 for vitality. Cronbach's alphas were .82 and .90 for these dimensions, respectively. Moreover, a second-order principal component analysis using both dimensions as indicators showed that both learning and vitality loaded at .88 on the expected higher-order component of workplace thriving, which accounted for 77.72% of total variance. Cronbach's alpha for the overall scale was .89 in the current sample. These results support the use of both subscales learning and vitality scores, as well as the score of the global scale as a representation of the higher-order construct of thriving at work.

RESULTS

Table 1 reports the descriptive statistics and correlations between the variables under study. Consistent with previous meta-analytic evidence, the sociodemographic variables under study (i.e., sex, education, age and organizational tenure), were uncorrelated with thriving at work (Kleine et al., 2019). As expected, both proactive personality and CSE personality traits were positively correlated with thriving and its dimensions of vitality and learning. Likewise, strengths use was positively linked with these criteria. As displayed, correlation coefficients between key variables under study (i.e., predictors, mediator and criteria) were equal to or above .30, with some of them reaching .50, corresponding to medium and large effect sizes (Cohen, 1988), respectively.

The only exception was the correlation between proactive personality and vitality, $r = .21, p < .05$. A post hoc potency analysis carried out using G*Power3 (Faul et al., 2007) indicated that with the current sample size ($N = 94$), the statistical power to detect a medium effect size was 91%, $r = .30; p < .05$, one-tailed, and 99% to detect a large effect, $r = .50; p < .05$, one-tailed, suggesting that, although small, the current sample has enough power to detect the relationships implied by the hypotheses of this study.

Table 1. Means, standard deviations and intercorrelations.

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Sex ^a			--									
2. Age	36.71	10.84	-.10	--								
3. EDU	4.78	1.13	.00	-.49***	--							
4. Tenure	9.44	10.56	.04	.77***	-.51***	--						
5. PP	5.43	0.83	.13	.18	-.13	.09	--					
6. CSE	4.99	0.84	.02	.14	.07	.02	.33**	--				
7. PSU	5.45	1.02	.03	.14	-.11	.13	.35**	.46***	--			
8. Learning	5.43	1.11	.01	.02	.07	-.11	.30**	.35***	.43***	--		
9. Vitality	4.65	1.16	-.06	.08	.04	.06	.21*	.43***	.50***	.55***	--	
10. Thriving	4.66	1.15	-.03	.06	.06	-.03	.29**	.44***	.53***	.88***	.89***	--

Note: $N = 94$. ^aMale = 0, Female = 1. EDU = Education, PP = Proactive personality, CSE = Core self-evaluations, PSU = Perceived strengths use. * $p < .05$. ** $p < .01$. *** $p < .001$.

Incremental validity analyses

In the face of the obtained pattern of correlations, hierarchical regression was used to test hypothesis 1, regarding the incremental validity of CSE over proactive personality to predict thriving at work and its facets (Cohen & Cohen, 1983). To control proactive personality effects, this variable entered in the first step, followed by CSE in the second step in each regression analysis for these three criteria. Table 2 displays the main results. For overall thriving, as shown in step 2, CSE incrementally predicts this criterion, over proactive personality, accounting for approximately 14% of its variance, $\beta = .391, p < .001, \Delta R^2 = .136, F(1, 91) = 15.88, p < .001$. A similar pattern of results was obtained for thriving subdimensions, showing that CSE yields an independent and significant contribution for explaining learning and vitality variance, 7% and 15% respectively, when proactive personality effects are also controlled. These results fully support H1.

Table 2. Incremental validity analyses of CSE for predicting thriving at work and its subdimensions, over proactive personality.

Independent variables	R	R ²	R ² adj	F _{change}	ΔR ²	β
<i>Thriving at work</i>						
Step 1	.288**	.083	.073	8.31**	---	
Proactive Personality						.288**
Step 2	.468***	.219	.202	15.88***	.136***	
CSE						.391***
<i>Learning</i>						
Step 1	.303**	.092	.082	9.31**	---	
Proactive Personality						.303**
Step 2	.402***	.162	.143	7.58**	.070**	
CSE						.349**
<i>Vitality</i>						
Step 1	.206*	.043	.032	4.10*	---	
Proactive Personality						.206*
Step 2	.436***	.235	.218	16.60***	.148***	
CSE						.407***

Note: N = 94. CSE = Core self-evaluations. *p < .05. **p < .01. ***p < .001.

A power analysis was carried out in G*Power3 to determine the power of the current sample size to detect such R² increases in respective linear multiple regression fixed models with a total number of two predictors (i.e., proactive personality and CSE) and an alpha value of .05. Analyses indicated that the statistical power yielded by this sample to detect the respective increases in R² (i.e., produced by the insertion of CSE on respective models) of .136, .070 and .148, were 97%, 75% and 98%. These results suggest that the current sample warrants quite adequate statistical power (reaching the 80% threshold, Cohen, 1988) to test the incremental validity of CSE, over proactive personality, to predict thriving at work and its dimension of vitality. In the case of the learning dimension, the level of power, despite being somewhat lower, is close to the recommended standard. Thus, overall we consider that the available sample size has fairly adequate statistical power to test H1.

Mediation analyses

To test hypothesis 2, according to which the link between CSE and thriving is mediated by perceived strengths use, PROCESS macro (model 4) for SPSS, developed by Hayes (2012) was used. The statistical significance of the correspondent indirect effect was estimated through calculation of bias-corrected 95% bootstrap intervals (95% BC), based on 5000 samples. Previous research has shown that bootstrapping warrants an adequate level of control over Type I and II errors and mitigates power problems stemming from potential non-normal sampling distributions of indirect effects (Hayes, 2017; Williams & MacKinnon, 2008). In line with the rationale of hypothesis 2, positing that CSE and proactive personality exert an independent influence in enhancing thriving at work in demanding work scenarios, such as during Covid-19 contingencies, proactive personality was entered as a covariate in the analysis (Bakker & Demerouti, 2017; Bakker & van Woerkom, 2018). The significant link between this disposition and thriving (r = .29, p < .01) reiterates the need for such procedure.

Table 2 summarizes the main results from mediation analyses. As showed in model 1, CSE (i.e., the predictor) yields a significant contribution (standardized coefficient = .39, p < .001) in explaining perceived strengths use (i.e., the mediator) variance, when proactive personality effects are also accounted for. In model 2a, both CSE (i.e., the predictor, standardized coefficient = .24, p < .05) and perceived strengths use (i.e., the mediator, standardized coefficient = .40, p < .001) significantly account for criterion variance, i.e. thriving at work. Thus, these results showed that the direct effect of CSE on work thriving is statistically significant. Furthermore, according to the bootstrap analyses performed, the indirect effect of CSE on this criterion, via perceived strengths use, was also significant since the corresponding bootstrap confidence interval does not contain zero (95% CI [.030, .275]). Lastly, proactive personality does not yield a significant contribution for predicting work thriving when both CSE and perceived strengths use are included in the model. This pattern of findings fully supports hypothesis 2 and further indicates that the effect of CSE on thriving is partially mediated by perceived strengths use.

Table 3. Mediation analyses results.

	Coefficient	SE	<i>p</i>	<i>BC Bootstrap 95% CI*</i>	
				Lower	Upper
<i>Model 1. Perceived strengths use as dependent variable</i>					
Constant	1.95	.68	.01	.604	3.299
Proactive personality	.22	.12	.03	.033	.499
CSE	.39	.10	.00	.214	.629
$R^2 = .25, F(2, 91) = 15.38, p < .001$					
<i>Model 2a. Thriving as dependent variable</i>					
Constant	1.21	.66	.07	-.101	2.529
Proactive personality	.09	.11	.43	-.134	.314
CSE	.24	.11	.02	.046	.467
Perceived strengths use	.40	.10	.00	.188	.577
$R^2 = .33, F(3, 90) = 14.93, p < .001$					
<i>Direct effect of CSE on thriving</i>	.24	.11		.046	.467
<i>Indirect effect of CSE on thriving via perceived strengths use</i>	.15	.06		.030	.275
<i>Model 2b. Learning as dependent variable</i>					
Constant					
Proactive personality	1.63	.79	.04	.061	3.195
CSE	.15	.13	.15	-.073	.460
Perceived strengths use	.16	.13	.13	-.059	.442
	.31	.12	.00	.101	.565
$R^2 = .23, F(3, 90) = 9.03, p < .001$					
<i>Direct effect of CSE on learning</i>	.16	.13		-.059	.442
<i>Indirect effect of CSE on learning via perceived strengths use</i>	.12	.06		.013	.226
<i>Model 2c. Vitality as dependent variable</i>					
Constant	.80	.77	.31	-.762	2.361
Proactive personality	-.01	.14	.92	-.279	.252
CSE	.26	.13	.01	.072	.571
Perceived strengths use	.38	.12	.00	.201	.663
$R^2 = .30, F(3, 90) = 12.74, p < .001$					
<i>Direct effect of CSE on vitality</i>	.26	.13		.072	.571
<i>Indirect effect of CSE on vitality via perceived strengths use</i>	.15	.07		.019	.300

Note: $N = 94$. CSE = Core self-evaluations. *Bias-corrected bootstrap confidence intervals. Coefficients reported are standardized.

Similarly, results from additional mediation analyses entering with learning (model 2b) and vitality (model 2c) as the dependent variable, supported the indirect effect of CSE on these thriving subdimensions, via perceived strengths use, when proactive personality effects are controlled.

Finally, to assess whether a minimum of 80% statistical power was guaranteed to test these mediating effects, we rely upon the empirical estimates of sample size provided by Fritz and MacKinnon (2007). Specifically, for the hypothesized indirect effect of CSE on overall thriving, via perceived strengths use and given that both the α path coefficient (i.e., the effect of the predictor on the mediator, $\alpha = .39$) and β path coefficient (i.e., the effect of the mediator on the criterion, $\beta = .40$) reached a medium effect size (Cohen, 1988; Fritz & MacKinnon 2007), a minimum sample of $N = 71$ is needed for testing mediation through the bias-corrected bootstrap method used in this study. The same applies for respective CSE indirect effects, through this mediator, on learning and vitality subdimensions since correspondent α and β path coefficients have also reached a medium effect size. Since the current sample size exceeds the specified value, we conclude that the recommended level of .80 statistical power was achieved, supporting its fair adequacy to run the respective mediation tests.

DISCUSSION

Covid-19 produced substantial, disruptive changes in the workplace, forcing organizations to support and preserve their workforce performance and well-being to withstand and remain effective throughout this crisis. Such changes increased the levels of uncertainty and strain in the job demands, prompting human resources management professionals and researchers to look for solutions to restore the balance between high job demands and required personal and job resources (Kniffin et al., 2021; Yi-Feng Chen et al., 2021). Based on the job demands-resources model (Bakker & Demerouti, 2017) and the conservation of resources theory (Hobfoll et al., 2018), the current study aimed to contribute to the related literature by examining the influence of two recognized key personal resources (i.e., proactive personality and core self-evaluations) on the promotion of employee well-being (operationalized as work thriving) during the pandemic. Building upon the rationale that these two constructs play an important and non-redundant role in predisposing employees to thrive at work in such scenario, our findings allow some theoretical and practical implications to be drawn.

These results replicate previous findings according to which proactive personality represents a valid and meaningful predictor of thriving at work (i.e., Yi-Feng Chen et al., 2021), but extend extant research by showing that CSE holds incremental validity, over proactive personality, for predicting this criterion and its dimensions of learning and vitality. Hence, from a conceptual viewpoint, these findings support the merits of CSE as an important personal resource to drive well-being at work, in the frame of disruptive and particularly stressful situations (Bakker & Demerouti, 2017, Yan et al., 2019). Therefore, they support the conceptualization of this meta-trait as a set of psychological resources, i.e., self-esteem, generalized self-efficacy, emotional stability and internal locus of control, that prompt individuals to thrive in the workplace by constantly learning and keeping a positive and energizing outlook in face of adversity (Hobfoll et al., 2018; Judge et al., 2003; Kleine et al., 2019; Naquin & Holton, 2002). Thus, the findings suggest that such resources are important and non-redundant with the individual tendency, represented by proactive personality, to take the initiative and persevere to enact positive change in the work environment, despite situational constraints.

Furthermore, our findings also contribute to an improved understanding about the psychological mechanisms through which these dispositions impact upon thriving at work. Specifically, they indicate that CSE exerts both a direct and indirect effect, through the motivational mechanism of perceived strengths use, even when the influence of proactive personality is controlled. Hence, these results are consistent with the job demands-resources model and the propositions of the conservation of resources theory, which asserts that employees' resources impact upon job performance and well-being due to their motivational potential, and are particularly useful in times of need (Bakker & Demerouti, 2017; Hobfoll et al., 2018). Consistently, they suggest that, even in face of increased job ambiguity and uncertainty, as triggered by the pandemic, employees with high CSE can capitalize upon a stronger sense of self-esteem, agency, control, and lower levels of neuroticism to perceive themselves as more able to mobilize their own strengths and efforts to attain job goals (Bakker & van Woerkom, 2018; Judge & Kammeyer-Mueller, 2011; Seligman et al., 2005).

Altogether, these findings suggest that both CSE and proactive personality should be considered for advancing theory about the role of personality in fuelling work thriving in highly adverse work scenarios. Yet, by pointing out that the effect of CSE on this criterion is only partially mediated by perceived strengths, our findings encourage future research to examine the joint effects of other significant mediators of the link between CSE and well-being, namely job crafting, job insecurity and burnout, due to their meaningful effects on such criteria, as shown by previous research (e.g., Kim & Beehr, 2020; Hsieh et al., 2019; Hsieh & Huang, 2017). Moreover, future research should also take into consideration the role of key job resources, like perceived organizational support, leadership and supervisory support (Sergent & Stajkovic, 2020; Yi-Feng Chen et al., 2021) for a more comprehensive understanding of whether and how these distinct

resources build together in promoting employee well-being in demanding work circumstances, such as during Covid-19 and analogous work crises.

Apart from these job-related aspects, there are other relevant contextual factors which deserve further examination, as additional psychological mechanisms through which CSE enhances thriving at work. These concern the acknowledgement of the beneficial effects of CSE on dealing with work-life balance issues, which were paramount during Covid-19. As evidenced by recent research, higher CSE helps promotes stronger organizational performance and prevent employees' intentions to quit their jobs, by assisting them in effectively balancing work-family demands (Katou, 2022; Wang & Li, 2021). Specifically, evidence suggests that employees with high CSE are psychologically better equipped to perceive challenging work demands and role overload more optimistically and appraise them as controllable events, which mitigates their potential negative emotional processes and also any detrimental interference of work in family-related responsibilities (Boyar & Mosley, 2007; Wang & Li, 2021).

In addition to these theoretical implications, our findings also provide some applied implications for building a workforce which is more capable of dealing with uncertain and highly demanding job situations, like those elicited by the current pandemic. Specifically, they suggest that assessing employees' CSE may become relevant and useful in identifying employees with fewer personal resources, i.e. lower CSE (Bipp et al., 2019, Yan et al., 2019), and who are thereby more likely to show a greater need for further job and organizational resources (e.g., supervisor and organizational support, Bakker & Demerouti, 2017) to maintain positive levels of well-being in adverse work situations.

Despite its contributions, this study has some limitations. Specifically, due to its small sample size, despite having sufficient levels of power to detect the main effects reported, it calls for replication of these findings in similar demanding scenarios before more solid conclusions can be drawn. Another limitation arises from the reliance upon a cross-sectional design, which demands caution in interpreting our findings, due to potential common method bias (Podsakoff et al., 2003; 2012). Furthermore, it was not possible to statistically control for such potential bias, given the small sample size, which brings the need to address this issue in future research in the context of analogous works crises.

Moreover, while proactive personality effects were controlled to fulfil current research purposes, the implemented survey was intentionally kept brief in face of employees' time constraints and difficulties in dealing with pandemic contingencies and life interferences, precluding the further assessment of other core personality predictors, like the big five. Still, due to its meaningful effects on well-being (see Anglim et al., 2020), the appraisal of their joint influence on this criterion would render a more complete picture of how key personality traits predispose individuals to mobilize their strengths and experience higher levels of well-being. Therefore, it remains as another clue for related research.

In conclusion, the empirical evidence obtained supports the relevancy of CSE in enhancing employees' well-being during Covid-19, beyond proactive personality, which prior research has mapped as a key dispositional antecedent of this criterion during this pandemic. Further, our findings have also showed that CSE has both direct and indirect effects on this critical outcome via perceived strengths use, independently of proactive personality, reiterating its utility for managing people at work during the pandemic and conceivably throughout similarly challenging work situations.

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