

THE ROLE OF CORE SELF-EVALUATIONS AND EGO-RESILIENCY IN PREDICTING RESOURCE LOSSES AND GAINS IN THE FACE OF THE COVID-19 CRISIS: THE PERSPECTIVE OF CONSERVATION OF RESOURCES THEORY

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Abstract

Objectives: The purpose of the present study was to investigate, through the lens of conservation of resources theory, the predictive role of 2 positive personality traits in the form of core self-evaluations (CSE) and ego-resiliency (ER) in resource losses and gains triggered by the COVID-19 crisis. **Material and Methods:** The 2 personality traits, constituting positive person-related resources, were examined in relation to resource losses and gains in both general and distinct life domains: hedonistic and vital, spiritual, family, economic and political, and finally power and prestige. **Results:** The findings from a nationwide sample of 1000 working adults (65% women; age $M \pm SD$ 38.93 \pm 10.9 years) indicated that CSE negatively predicted resource losses, whereas ER served as a positive predictor of resource gains. The predictive role of personality traits was demonstrated both for resource losses and gains in general and in different life domains. **Conclusions:** The results of this study highlight in particular the role of CSE as a protective factor of resource losses, and the role of ER as a promotive factor of resource gains, suggesting that both traits might evoke divergent resilience responses when facing prolonged stressful life events. *Int J Occup Med Environ Health.* 2023;36(4):551–62

Key words:

stress, ego-resiliency, conservation of resources theory, COVID-19, core self-evaluations, resource losses and gains

INTRODUCTION

The COVID-19 pandemic forced a change in previous social and professional activity. The restrictions imposed by national governments assumed reducing social contact to the necessary minimum, in some cases going as far as prohibiting people from leaving their place of residence. This situation gave rise to a number of changes in the existing patterns of individual functioning. Initially,

it seemed that the psychological difficulties emerging during the pandemic would take the form of a temporary crisis related to the need to isolate, reduced social contact, and fear of illness. Today, it is already known that the psychological consequences of the COVID-19 pandemic include a whole spectrum of different types of psychopathological symptoms or groups of symptoms of varying duration and severity [1]. This knowledge provides

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the basis for research into factors that can provide protection for the individual faced with similar situations involving the need for rapid adaptive responses.

The long-lasting COVID-19 crisis affected population mental health and well-being, generating psychological distress, whose level depends on the interplay of individual' psychological resources and risk factors [2]. However, research on long-term consequences of this crisis situation in the form of changes in resources is still scarce. Little is also known about the relative importance of positive personality traits in predicting resource losses and gains, in particular during the silent changes taking place in different areas of life due to the COVID-19 pandemic. To address these unresolved issues, the authors tested 2 personality traits arising from the positive psychology framework – core self-evaluations (CSE) and ego-resilience (ER) – as predictors of resource losses and gains triggered by the prolonged COVID-19 crisis.

Research conducted so far related to an analysis of psychosocial resource gains and losses in a situation of sudden change has mainly been based on the conservation of resources theory (COR) proposed by S. Hobfoll [3]. The assumption underlying COR theory is that human activity is centered around seeking, maintaining, and also protecting what is valuable and helpful for survival. According to this rule, humans accumulate and use resources that are important to them to regulate the Self and to function socially within a specific community and culture [4]. Research was carried out in situations such as the economic transformation in Russia [5,6], and natural disasters [7].

Seeking to develop the previous research in this area, the authors tested 2 personality traits resulting from the positive psychology framework – CSE and ER – as predictors of resource losses and gains induced by the prolonged COVID-19 crisis. The selection of these personality traits in the present study reflects that both of them might be regarded as person-related resources enabling resil-

ient reaction to stressful events [8–11]. In terms of COR theory, CSE and ER might create a caravan of resources, i.e., a package of resources that appear and exist together, being a result of nurturance and learned adaptation [12]. Together, these dispositional factors could strengthen each other and contribute to maintaining existing resources and acquiring new ones. However, despite these general similarities between the traits, the type of adaptive response each of them evokes might be slightly different, resulting in distinct beneficial life outcomes.

Core self-evaluations represent positive self-construal, manifesting itself in approaching the changing external environment in an active, agentic, and confident way [13]. In turn, ER reflects in the ability to regulate self-control in response to the demands of the situational context. When confronted with life challenges and hardships, the adaptive flexibility characteristic for those high in ER enables them to react in a more rigid and persistent manner [14]. Considering these conceptual differences between the 2 dispositional traits, referring to the patterns of reactions to changes in the external world, their adaptive role in mitigating resource losses and enhancing resource gains might be different. As a marker of social agency and self-assurance when coping with the prolonged stressful events [15], CSE might generate a more active resilience response, serving as a promotive factor when facing life challenges. In turn, ER could manifest itself to a greater extent through a passive resilience response, thus playing the role of a protective factor when confronting hardships and adversity in life. In terms of COR theory [16,17], both traits might be considered as resilience constructs, since they enable the individual to cope with major life stresses. In line with this view, combined, they could have shaped individual' resilience response to unpredictable resource losses and gains in the COVID-19 crisis. However, given the differences between the 2 traits, CSE might be a more silent predictor of resource losses, while ER might better predict resource gains.

Aim and hypotheses

Given the above-mentioned considerations, the current study aimed at investigating the predictive role of CSE and ER in perceived resource losses and gains triggered by the COVID-19 pandemic among working adults from the Polish general population. Through the lens of the conservation of resources theory [18], the authors analyzed the general levels of resource losses and gains along with the levels of resource losses and gains in specific domains, referring to distinct life areas. Based on prior research [19], the authors examined gains and losses in 5 groups of resources relevant to the Polish population, including resources termed as hedonistic and vital, spiritual, family, economic and political, and finally power and prestige. The authors expected that the divergent patterns of associations between positive personality traits and resource losses and gains would be observed both at the general and facet levels.

Ethics statements

The current study was carried out following the human research ethical principles included in the Declaration of Helsinki. All respondents provided written informed consent prior to beginning the survey. The local institutional review board of the Ethics Committee of the University of Silesia in Katowice, Poland, approved the study procedure before its commencement (decision No. KEUS.85/02.2021).

MATERIAL AND METHODS

Participants and procedure

The data was collected through the nationwide online research panel run by the Polish research company Bio-Stat in March 2021 as a part of a broader online questionnaire-based study on resource losses and gains during the COVID-19 pandemic in the general population [20]. The study was anonymous and participation was voluntary, and the respondents were compensated with

small rewards on their accounts on the research panel in the form of bonus points after completing the study. All respondents gave written informed consent before providing sociodemographic data and filling in the questionnaires. The survey took about 15–20 min to complete.

The sample comprised a total of 1000 working adults from Poland (650 women, 350 men), aged 18–70 years, with a mean age of 38.93 years (SD = 10.9 years). With regard to the education level, 481 (48.1%) participants reported higher education, 426 (42.6%) secondary education, 83 (8.3%) vocational education, and 10 (1.0%) elementary education. The participants were working in different branches and organizations with an average organizational tenure of 7.26 years (SD = 6.9 years) and with a general work tenure of 15.7 years (SD = 9.98 years). Most of them were working on the basis of a permanent work contract (69.5%), while other respondents were employed under a temporary work contract (16.1%), a civil law contract (7.4%) or as entrepreneurs (7%). Before conducting the study, the authors applied the G*Power software v. 3.1.9.4 to carry out an *a priori* power analysis. The required minimum sample size to achieve statistical power of 0.95 at 0.05 significance level with medium effect size ($f^2=0.15$) for the multiple regression model with 4 predictors was 129. Consequently, the sample size of 1000 participants in the current study considerably exceeded the minimal sample size.

Measures

Resource losses and gains

Resource losses and gains were measured with the Polish adaptation of the *Conservation of Resources Evaluation* (COR-E) [18,19]. The questionnaire is divided into two 40-item sections (A and B), containing a list of resources, pertaining to the 5 life domains, such as: hedonistic and vital (e.g., “having passion in life”), spiritual (e.g., “hope”), family (e.g., “good relationships with your loved ones”), economic and political (e.g., “job security”), power and

prestige (e.g., “having power”). Section A of the measure is used to assess the perceived resources importance on a 5-point scale (1 – “not at all important,” 5 – “very important”). Section B makes it possible to evaluate the scope of resource losses and gains (defined as changes for worse or better, respectively) in the individual’s life within the last 12 months. Each item is assessed separately for losses and gains on a 6-point scale from 0 (“no loss” for losses and “no gain” for gains) to 5 (“very great loss” for losses and “very great gain” for gains). To evaluate the final levels of resource losses and gains, the results from both sections were multiplied and then summarized, which led to obtaining a separate aggregated indicator of resource losses and an aggregated indicator of resource gains. With regard to the general levels of resources, Cronbach’s α amounted for 0.96 for resource losses and 0.98 for resource gains. Cronbach’s α for resources within the distinct categories ranged 0.84–0.92 for losses, and 0.89–0.93 for gains.

Core self-evaluations

Core self-evaluations were assessed using the *Core Self-Evaluations Scale* (CSES) [13,21]. The scale contains 12 items with a 5-point Likert-type response rate, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”). An example item is “When I try, I generally succeed.” Cronbach’s α was 0.80 in this study.

Ego-resiliency

Ego-resiliency was measured with the *Ego-Resiliency Scale* (ERS) [8,22]. Each statement is rated on a 4-point scale from 1 (“does not apply at all”) to 4 (“refers to me a lot”). An example item is “I enjoy dealing with new and unusual situations”. Cronbach’s α coefficient was 0.83.

Statistical analyses

In the present study, all statistical analyses were carried out in the SPSS statistical software, v. 28. In the first step, the authors calculated descriptive statistics and intercor-

relations among the study variables as part of the preliminary analyses. Also the normality of the distribution was checked for all study variables using the Kolmogorov-Smirnov test with Lilliefors correction and calculated skewness and kurtosis of variable distributions. In addition, to identify common method variance in the present study, Harman’s single-factor test was applied within the preliminary statistical analyses. Finally, to test the predictive role of personality traits in resource losses and gains, a series of multiple linear regression models were conducted. In all the regression models, the authors controlled for the basic sociodemographic characteristics, i.e., age and sex.

RESULTS

Table 1 displays means, standard deviations, skewness, kurtosis, Kolmogorov-Smirnov tests for normality with Lilliefors correction, Spearman’s rank correlation coefficients, and reliability estimates (Cronbach’s α) of the study variables in the total sample. Given that the distributions of the study variables deviated from normality, a non-parametric Spearman’s correlation coefficient was used. Harman’s 1-factor test, used to check the presence of a common method bias, showed that the single factor extracted 22.81% of the total variance. As the total variance explained by one factor was lower in that the threshold of 50%, there was no evidence of a common method bias in the study.

Core self-evaluations and ER were moderately positively correlated, which seems to reflect the conceptual similarities between the 2 constructs referring to their active involvement in the resilience process and goal commitment, and relationships with general and domain-specific satisfaction [23]. The general pattern of correlations between the main study variables showed that CSE was negatively correlated with the total score of resource losses and resource losses in each of the 5 resource losses domains. In contrast, ER was positively correlated with resource gains, both in general and in the distinct

Table 1. Descriptive statistics, tests of normality, reliability coefficients and Spearman's rank correlation coefficients for the study variables in the study conducted on the research group including 1000 working adults from the Polish general population through the nationwide online research panel run by the research company BioStat, March 2021, Poland

Variable	Correlation																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
1. Age	–																
2. Sex	0.11***	–															
3. Core self-evaluations	0.13***	0.06	0.80														
4. Ego-resiliency	0.08*	0.02	0.44***	0.83													
5. Total losses	-0.10**	-0.09**	-0.23***	0.02	0.96												
6. Hedonic losses	-0.12***	-0.09**	-0.21***	0.03	0.94***	0.89											
7. Spiritual losses	-0.05	-0.01	-0.20***	0	0.83***	0.73***	0.89										
8. Family losses	-0.05	-0.03	-0.23***	-0.01	0.84***	0.73***	0.76***	0.92									
9. Economic and political losses	-0.09**	-0.13***	-0.19***	0.04	0.85***	0.77***	0.56***	0.58***	0.84								
10. Power and prestige losses	-0.10**	0	-0.18***	0	0.78***	0.71***	0.74***	0.72***	0.53***	0.88							
11. Total gains	-0.11***	-0.05	0.03	0.17***	0.45***	0.35***	0.53***	0.49***	0.26***	0.51***	–						
12. Hedonic gains	-0.15***	-0.03	0.06	0.18***	0.40***	0.30***	0.48***	0.44***	0.23***	0.44***	0.93***	0.93					
13. Spiritual gains	-0.10**	-0.03	0.03	0.12***	0.45***	0.36***	0.53***	0.48***	0.25***	0.51***	0.90***	0.82***	0.89				
14. Family gains	-0.07*	-0.09**	0.03	0.15***	0.40***	0.31***	0.45***	0.45***	0.25***	0.45***	0.90***	0.76***	0.79***	0.93			
15. Economic and political gains	-0.05	-0.02	0	0.13***	0.38***	0.30***	0.48***	0.47***	0.17***	0.47***	0.87***	0.80***	0.73***	0.68***	0.90		
16. Power and prestige gains	-0.11***	0.01	-0.02	0.11***	0.42***	0.33***	0.53***	0.49***	0.19***	0.59***	0.83***	0.77***	0.77***	0.69***	0.76***	0.90	
M	38.93	1.35	38.10	33.48	199.08	62.35	25.24	37.23	60.62	13.64	189.92	54.58	31.58	52.73	35.57	15.45	
SD	10.91	0.48	6.44	6.19	171.64	52.79	32.28	45.38	43.05	21.10	191.50	55.70	34.85	53.51	41	22.99	
Skewness	0.25	–	0.20	-0.12	1.24	0.90	1.61	1.49	0.50	2.05	1.28	1.16	1.31	1.01	1.25	1.81	
Kurtosis	-0.61	–	0.82	0.05	1.84	0.58	2.46	1.90	-0.22	4.55	1.39	.93	1.45	0.31	1.03	3.18	
Kolmogorov-Smirnov test ^a	0.06	–	0.08	0.06	0.12	0.12	0.22	0.21	0.08	0.26	0.16	0.16	0.18	0.16	0.19	0.25	
df	1000	–	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
p	<0.001	–	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Sex is coded as 1 – male, 2 – female.

Cronbach's α for the total sample on the diagonal.

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

^a Kolmogorov-Smirnov test for normality with Lilliefors correction.

domains. The magnitude of correlations between personality traits and resource losses and gains was weak.

The results of multiple regression analyses for resource losses and gains as outcome variables are reported in Table 2. In all analyses, demographic variables (age, sex) and personality traits (CSE, ER) were included as predictors. For resource losses, the predictor variables accounted for 9% of variance in hedonic losses, 8% of variance in general losses and economic and political losses, and 5% of variance in spiritual, family, and power and prestige losses. In all 6 models, CSE emerged as a negative predictor, whereas ER was a positive predictor, which might suggest suppression. For resource gains, the predictors accounted for 8% of variance in hedonic gains, 7% of variance in total gains, 6% of variance in family gains, 5% of variance in family and power and prestige gains, and 4% of variance in economic and political gains. Ego-resiliency was a consistent positive predictor in all models predicting resource gains, suggesting that higher ER is associated with increased resource gains. Age negatively predicted all types of gains besides economic and political gains. Core self-evaluations weakly negatively predicted spiritual as well as power and prestige gains, which also might indicate a suppression effect.

The authors conducted a *post hoc* power analysis in the G*Power software, v. 3.1.9.4, to calculate the achieved power in the multiple linear regression models. The calculated power for the multiple regression model with 4 predictors and sample size of 1000 with medium effect size ($f^2 = 0.15$) and α error probability of 0.05 was 1, indicating that the statistical power of the conducted regression analyses was large.

DISCUSSION

The current human environment is starting to become saturated with chronic and cyclical crises, such as the climate crisis or pandemics, evidently exceeding the management capacities, and even the cognitive capacities of humans. The problems of information oversaturation and the

changes brought about by technological development are becoming no less alarming. Recent study findings lead to the conclusion that currently most researchers, in response to these challenges, seek personality-related determinants of adaptive behaviors, mainly analyzing the role of Big Five traits [24–26]. The research presented in this article, in turn, complements the discourse on human response to extreme uncertainty and to chronic and difficult-to-predict challenges by adding the concepts of COR [6,7] and CSR [15] as well as ER [14]. The main aim was to investigate the predictive role of CSE and ER in resource losses and gains in the era of the COVID-19 pandemic.

The authors demonstrated that CSE negatively predicted resource losses, whereas ego-resiliency positively predicted resource gains. These results suggest that both personality traits contribute to the resilience response in the face of external stressful events. Consequently, supporting prior research [9,11], they might be seen as positive person-related resources that sustain other types of resources, consequently providing resilience in the face of life changes. However, the divergent patterns of relationships of CSE and ER with resource losses and gains seem to indicate that both dispositional variables could induce distinct adaptive responses to life adversities and demanding external conditions, despite some conceptual similarities between the 2 traits.

The negative relationships between CSE and resource losses might imply the importance of this personality trait in protecting resources. These findings are in line with the notion that CSE manifest themselves in a more active response to stressful events [15] in the form of less avoidance coping and more problem-solving coping [24], which might stem from the general positive evaluations about the self of those high in CSE [25]. Hence, CSE could contribute to a greater extent to reducing resource losses as a result of more effective mechanisms of control, protection and management of existing resources. Accordingly, in order to protect one's own resources, those high in CSE might face the perceived resource losses in a more

Table 2. Standardized and unstandardized regression coefficients for control variables, core self-evaluations (CSE) and ego-resiliency (ER) predicting resource losses and gains in the study conducted on the research group including 1000 working adults from the Polish general population through the nationwide online research panel run by the research company BioStat, March 2021, Poland

Coefficient	Variable				Adjusted R ²	F(4, 995)
	age	sex	CSE	ER		
Losses						
total					0.08	23.96***
β	-0.06	-0.04	-0.31***	0.21***		
B (SE)	-0.88 (0.48)	-15.66 (10.99)	-8.22 (0.92)	5.92 (0.95)		
95% CI	-1.83-0.07	-37.23-5.91	-10.02-(-6.41)	4.04-7.79		
hedonic					0.09	25.05***
β	-0.07*	-0.07*	-0.30***	0.21***		
B (SE)	-0.36 (0.15)	-7.17 (3.37)	-2.48 (0.28)	1.78 (.29)		
95% CI	-0.65-(-0.07)	-13.79-(-0.55)	-3.04-(-1.93)	1.2-2.35		
spiritual					0.05	14.67***
β	-0.05	0	-0.25***	0.18***		
B (SE)	-0.14 (.09)	0.21 (2.1)	-1.26 (0.18)	0.93 (.18)		
95% CI	-0.32-0.05	-3.92-4.34	-1.60-(-0.91)	0.57-1.29		
family					0.05	15.02***
β	-0.01	-0.01	-0.26***	0.17***		
B (SE)	-0.05 (0.13)	-1.03 (2.95)	-1.85 (0.25)	1.26 (0.26)		
95% CI	-0.30-0.21	-6.83-4.77	-2.34-(-1.36)	0.76-1.76		
economic and political					0.08	22.57***
β	-0.05	-0.10**	-0.28***	0.20***		
B (SE)	-0.21 (0.12)	-8.94 (2.76)	-1.85 (0.23)	1.38 (0.24)		
95% CI	-0.45-0.03	-14.36-(-3.51)	-2.30-(-1.39)	0.91-1.86		
power and prestige					0.05	13.87***
β	-0.07*	0.03	-0.24***	0.16***		
B (SE)	-0.13 (0.06)	1.27 (1.38)	-0.78 (0.12)	0.56 (0.12)		
95% CI	-0.25-(-0.01)	-1.44-3.97	-1.01-(-0.56)	0.33-0.79		
Gains						
total					0.07	18.29***
β	-0.11***	-0.03	-0.05	0.26***		
B (SE)	-1.94 (0.55)	-10.40 (12.39)	-1.42 (1.04)	8.12 (1.08)		
95% CI	-3.01-(-0.87)	-34.71-13.92	-3.46-0.62	6.01-10.23		
hedonic					0.08	23.56***
β	-0.16***	-0.01	-0.01	0.27***		
B (SE)	-0.84 (0.16)	-0.74 (3.57)	-0.11 (0.30)	2.38 (0.31)		
95% CI	-1.15-(-0.53)	-7.74-6.26	-0.69-0.48	1.78-2.99		

Table 2. Standardized and unstandardized regression coefficients for control variables, core self-evaluations (CSE) and ego-resiliency (ER) predicting resource losses and gains in the study conducted on the research group including 1000 working adults from the Polish general population through the nationwide online research panel run by the research company BioStat, March 2021, Poland – cont.

Coefficient	Variable				Adjusted R ²	F(4, 995)
	age	sex	CSE	ER		
Gains – cont.						
spiritual					0.05	15.16***
β	–0.10***	–0.03	–0.09*	0.25***		
B (SE)	–0.33 (0.10)	–1.82 (2.27)	–0.46 (0.19)	1.39 (0.20)		
95% CI	–0.53–(–0.13)	–6.27–2.63	–0.84–(–0.09)	1–1.77		
family					0.06	16.61***
β	–0.07*	–0.08**	–0.01	0.24***		
B (SE)	–0.34 (0.15)	–9.42 (3.47)	–0.09 (0.29)	2.03 (0.30)		
95% CI	–0.64–(–0.04)	–16.24–(–2.61)	–0.66–0.48	1.44–2.62		
economic and political					0.04	10.55***
β	–0.05	0	–0.07	0.22***		
B (SE)	–0.20 (0.12)	0.27 (2.69)	–0.43 (0.23)	1.46 (0.23)		
95% CI	–0.43–0.03	–5.02–5.55	–0.87–0.02	1.01–1.92		
power and prestige					0.05	13.33***
β	–0.11***	0.03	–0.09**	0.23***		
B (SE)	–0.23 (0.07)	1.32 (1.5)	–0.33 (0.13)	0.85 (0.13)		
95% CI	–0.36–(–0.10)	–1.63–4.27	–0.57–(–0.08)	0.60–1.11		

β – standardized regression coefficient; B(SE) – unstandardized regression coefficient (standard error for unstandardized regression coefficient).

Sex is coded as 1 – male, 2 – female.

* p < 0.05; ** p < 0.01; *** p < 0.001.

agentic and confident manner by actively seeking situations which help to mitigate these losses [11].

As opposed to CSE, ER as a security paradigm is more visible in the scientific discourse related to studies on risk as well as crisis and disaster management [38]. As emphasized by Stepka [39], ER is based on a schema of thinking about threats as challenges, whose nature is distributed, hybrid, networked, and uncertain, and thus requiring constant recognition, evaluation, and management [40]. Therefore, ER seems to be more significant in resource acquisition, bearing in mind its positive links to their increase. The results obtained seem to reflect the fundamental aspects of ER as a construct. Thus, ER seems to

be more salient in resource acquisition, given its positive linkages with resource gains.

These results seem to reflect the basic aspects of the construct of ER. As ER on the most general level represents personality structures involved in resourceful adaptation and flexibility, effective coping, and an active and engaging attitude to the environment, it might constitute the key person-related protective factor when facing external stressors [25,27]. As a result, those high in ER might be more inclined to seek, find and mobilize resources when facing life difficulties. In addition, thanks to a more differentiated behavioral repertoire and positive engagement with the world marked by increased positive affect and

openness to experience [8], high ER is likely to increase the chance to successfully acquire external resources, thus serving as a promotive factor in resource gain. The positive associations between ER and resource losses, found in multiple regression models, seem also to indicate that ER, which encompasses balanced, adaptive self-control [28], might promote a more accepting attitude to resource losses induced by the COVID pandemic. Given that the pandemic restrictions were imposed externally in different spheres of life and as a result are placed outside the individual's internal control, the behavioral strategy involving the acceptance of changes in the environment context accompanying high ER might be more functional and adequate.

The above-mentioned differences in the relationships of CSE and ER with resource losses and gains not only highlight the disparities between these 2 personality traits in bringing positive life consequences, in particular in terms of successful adaptation to changing external environment, but might also indicate their complementarity in the resilience response. In terms of COR theory and evolutionary framework, although both of them represent adaptive personality traits, CSE seems to manifest itself in a more defensive evolutionary strategy aimed to conserve resources, whereas ER appears to be expressed in a more exploratory strategy, involving searching for and accumulating new resources [12]. Together, both dispositions might help the individual to successfully react to different categories of resource changes by creating a person-related shield minimizing resource losses and sustaining resource gains [cf. 11]. These results suggest the both CSE and ER are essential in the process of individual adaptation to changing environmental conditions, supporting the potential value of training and interventions aimed at enhancing both adaptive personality traits considered in this study. In this vein, therapeutic and educational interventions should focus not only on the narrowly understood defense against threats, but above all on the constant improvement of the individual's ability to recover their resources and restore functionalities, whenever they have been compromised by a crisis.

Limitations and future research

The current findings have several limitations. First, a cross-sectional study design was used in the present study, which does not make it possible to draw causal conclusions about the relationships between personality traits and resource losses and gains. Second, the gender imbalance (65% women) might have affected the results, as prior research showed that women reported different stress responses than men, including higher levels of chronic stressors and minor daily stressors, as well as more emotional and avoidant coping styles [29,30]. Third, following the construction of the COR-E measure, the participants were asked to retrospectively assess resource losses and gains during the 12-month period considered. However, this measurement method makes it impossible to evaluate the daily changes of resources within the potential trajectories of the latter [31]. To overcome the above-mentioned shortcomings and to better understand how the resource process unfolds, in the future it would be worth using a longitudinal or an episodic approach on a different sample, involving a more balanced gender ratio. Another limitation of the present study also might be attributed to the method of measuring resource losses and gains in employees during the COVID-19 pandemic. The authors stressed in the invitation to the study, the general introductory instruction of the study, the informed consent form for participation in the study, and the instruction of the COR-E questionnaire that the research refers to the respondents' resource losses and gains due to the COVID-19 pandemic in the last 12 months. However, the changes in resources in a given 12-month period might also be partially attributed to factors other than the COVID-19 pandemic, e.g., resulting from personal life changes unrelated to the pandemic or being part of life and family developmental cycle. To better disentangle which part of the variance in resource losses and gains is due to factors other than the COVID-19 pandemic, it would be worth replicating the research on a similar sample after the COVID-19 pandemic. Compar-

ing the results from both studies might help to establish better how resource losses and gains have been formed during the pandemic and outside the period of the pandemic. In addition, in the study, only 2 dispositional variables were included out of a broader catalogue of positive personality traits, differentiated within the positive psychology framework, which – in line with COR theory [32] can exist together as intercorrelated personal resources forming a caravan of resources. Thus, further studies will need to include other positive traits or character strengths, affecting how the individual copes with life stressors and predicting positive life functioning, e.g. dispositional self-compassion, mindfulness, and gratitude [33,34]. Finally, the authors focused only on the personality predictors of resource losses and gains without taking into account environmental conditions that could affect changes in resources. Therefore, following the concept of caravan passageways from the COR theory, which refers to the environmental conditions that support and protect the resources [12,32], subsequent work in this area should also include social or environmental factors that might enhance resilience.

CONCLUSIONS

The present study demonstrated the predictive role of CSE and ER in resource losses and gains during the prolonged COVID-19 crisis. Specifically, the authors found that CSE were a more silent negative predictor of resource losses, suggesting their vital role in protecting the current resources by mobilizing the individual against resource losses. In contrast, ER emerged as a positive predictor of resource gains, indicating that this dispositional factor might be mainly involved in promoting acquisition of the new resource. These results suggest that both personality traits contributed to a resilience response in the COVID-19 crisis, albeit in distinct ways. The research performed can provide an indication for therapeutic interventions in situations where the individual needs to adapt to environmental changes, other than a pandemic, but bearing a potential for resource losses and gains.

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Collecting material: Elżbieta Turska

Statistical analysis: Elżbieta Sanecka

Interpretation of results: Elżbieta Sanecka, Marta Stasiła-Sieradzka, Elżbieta Turska

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