

Research paper

Psychological distress among the unemployed: Do core self-evaluations and emotional intelligence help to minimize the psychological costs of unemployment?



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ABSTRACT

Background: Past research has shown that emotional intelligence (EI) and core self-evaluations (CSE) have a unique and independent role in the prediction of psychological maladjustment in the unemployed population. However, no one to date has examined the joint contribution of EI and CSE in predicting well-being and psychological distress among the unemployed. Our objective was to examine the main and interactive role of EI and CSE in the prediction of indicators for happiness, depression, stress, and anxiety beyond socio-demographics variables.

Methods: A sample of 1796 unemployed participants completed a battery that included socio-demographic data and questionnaires of EI, CSE, happiness, depression, stress, and anxiety. We processed the data with SPSS and Hayes PROCESS macro.

Results: Pearson correlation analyses showed significant associations between EI and CSE with different mental health outcomes. Moderation analyses revealed that, beyond the main effects, the interactive term $EI \times CSE$ increased the explained variance of the prediction of happiness, but not of depression, anxiety, or stress.

Limitations: The study comprised an incidental non-clinical sample of unemployed adults, so the results might not generalize to a clinical population. Also, the study was cross-sectional, and we relied only on self-report measures, which do not allow for establishing causal links and might include biases, such as social desirability and common method variance.

Conclusions: These findings highlight the need for developing more comprehensive models including the interaction of EI and dispositional traits as contributing factors in the prediction of positive outcomes among the unemployed. Also, future promotion programs should include dimensions related to EI and CSE for increasing well-being during unemployment.

1. Introduction

Unemployment constitutes a significant economic and public health problem in the European Union. Eurostat and INE reported the highest unemployment rates in Greece (20.6%) and Spain (16.1%) (Eurostat Unemployment Database, 2018) with 3304,300 unemployed (Instituto Nacional de Estadística (INE), 2018). It is well documented that during periods of economic recession, the prevalence of mental illness, distress, depression, and suicide increase alarmingly (Chang et al., 2013; Fitch et al., 2011; Haw et al., 2015; Katikireddi et al., 2012). In addition, as a result of economic and psychosocial changes associated with job loss (e.g., financial deprivation, diminished social status and social contact, reduced self-esteem between others, etc.)

(Wanberg, 2012), levels of psychological well-being tend to decrease, and mental health-related symptoms such as anxiety and depression tend to appear (Winkelmann and Winkelmann, 1998). Therefore, interventions to help alleviate unemployment's consequences on well-being are a key component of policy response to cycles of recession. For instance, in a recent systematic review of interventions to reduce unemployment's psychosocial impact, Moore et al. (2017) found that integrative interventions focusing on social support, skill training, decision making, building self-esteem, increasing the sense of mastery and personal control, and inoculation against setbacks were effective for reducing the levels of depression up to two years post-intervention. Accordingly, other researchers have pointed out that interventions including both dispositional and social dimensions to help cope with job

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loss would reduce psychological distress (Latack et al., 1995; McKee-Ryan and Kinicki, 2002) and boost psychological well-being during unemployment (McKee-Ryan et al., 2005).

One relevant personal dimension included in these interventions is emotional intelligence (EI), which has emerged as a psychological construct systematically related to health behaviors, subjective well-being, and interpersonal functioning (Mayer et al., 2008). From an ability perspective, EI involves a set of basic emotional skills, such as the ability to perceive emotions, to access and generate emotions to enhance thought, to understand both emotions and emotional knowledge, and to regulate emotions (Mayer and Salovey, 1997). Research on EI has focused on examining the role of emotional abilities as predictors of health correlates (Keefer et al., 2009; Woolery and Salovey, 2004) and developing cognitive, affective, and behavioral strategies that help individuals to cope with stress, which leads to higher psychological health and well-being (Hodžić et al., 2017; Van Heck and Den Ouden, 2008). Also, EI might be a fundamental construct in understanding the differences in how individuals manage the negative emotions associated with chronic unemployment. In fact, existing evidence suggests that EI plays a central role in unemployment, contributing to positive well-being (Hodžić et al., 2015; Extremera and Rey, 2016; Berrios et al., 2016).

Beyond EI, another personal resource that scholars have typically associated with well-being in unemployment is core-self evaluations (CSE) (McKee-Ryan et al., 2005). CSE is a cognitive appraisal defined as subjective and fundamental self-evaluation of effectiveness, perceived value, and individual skills (Judge et al., 2003). Scholars have characterized CSE with four personality aspects: self-esteem, self-efficacy, locus of control, and emotional stability (Judge et al., 2003; Yu, 2016). Prior researchers have found that CSE is likely a significant predictor of fewer mental health problems and greater well-being. Moreover, researchers have found CSE to be a significant predictor of positive coping strategies during unemployment (Virkes et al., 2017), better health (Virga & Rusu, 2018), and fewer psychological problems (e.g., anxiety, stress, and depression) (Rey et al., 2016) among unemployed adults. Given the predictive value of these theoretical constructs on well-being during unemployment alone, examining the confluence of EI and CSE would be important, as the interaction of EI and CSE together might better help in predicting emotional maladjustment during unemployment than would either construct separately. Different researchers have asserted the need to consider joint analysis of the influence of these emotional skills in interaction with other personality traits, such as CSE, that are considered shock absorbers of deficits in well-being and quality of life (Kammeyer-Mueller et al., 2009; Rey et al., 2016).

Researchers of EI have found that individuals who report low emotional abilities might still be able to attain positive outcomes if they believe in their own competence to tackle difficulties and to cope with adversity (e.g. Chan, 2008; Gohm et al., 2005; Salguero et al., 2015). Therefore, low EI might be associated with lower well-being among the unemployed, especially among those with low EI and low CSE. On the other hand, high EI might be related to high well-being among the unemployed, especially among those with high EI and high CSE. For example, Salguero et al. (2015) found that female students with high EI abilities reported lower depressive symptoms when they had higher emotional self-efficacy. Nevertheless, the negative association between EI and depression was most pronounced among women with low emotional self-efficacy, compared to their counterparts with high emotional self-efficacy. To date, no one has yet examined EI's contributive role with other forms of self-efficacy, such as CSE, as interactive predictors of positive and negative outcomes in an at-risk adult population (e.g., the unemployed).

Our main aim in this study was to examine the potential role of EI and CSE in predicting indicators of well-being (happiness) and symptoms of psychological distress (depression, anxiety, stress) among the unemployed. We had four specific objectives: (1) to examine the relationships between EI, CSE, well-being, and psychological distress; (2)

to analyze whether EI accounts for significant variance in predicting well-being and psychological distress outcomes; (3) to see if the inclusion of CSE would significantly add to the prediction of additional unique variance beyond what EI can account for in predicting health indicators; and (4) to see whether a significant EI x CSE interaction exists that would account for further unique variances in predicting well-being and psychological distress outcomes beyond socio-demographic variables and main effects. Based on the aforementioned findings, we expected EI and CSE to positively associate with happiness and negatively relate to depression, anxiety, and stress. We predicted that EI would account for a significant amount of the variance in each of the indicators. We also expected the inclusion of CSE to significantly augment the prediction model of happiness and psychological distress outcomes in the unemployed. Finally, we hypothesized that a significant EI x CSE interaction in predicting outcomes would exist.

2. Method

2.1. Participants and procedure

Participants provided their written informed consent and received a questionnaire set containing the measures assembled in the study. Inclusion criteria were being unemployed and actively looking for a job at the time of the survey. Approximately 65% of those approached were willing to participate. Overall, the final sample included 1796 participants (958 women, 53%). The mean age was 34.94 years ($SD = 11.32$; range 17 to 65). The average duration of unemployment was 21.72 months ($SD = 40.26$).

2.2. Measures

2.2.1. Emotional intelligence

We used the Spanish version of the Wong and Law Emotional Intelligence Scale (WLEIS) (Wong and Law, 2002) to measure self-reported EI. Participants responded on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). We then calculated a global EI score where higher scores indicated a greater EI. The WLEIS has shown high levels of reliability and validity in Spanish samples (Extremera et al., 2019). Cronbach's alpha in this study was 0.93.

2.2.2. Core self-evaluations scale

The Core Self-Evaluations Scale (CSES) (Judge et al., 2003) is a 12-item scale intended to measure the underlying self-evaluative factor that is present across the four more specific traits: self-esteem, generalized self-efficacy, neuroticism, and locus of control. The CSE has shown high levels of reliability and validity in Spanish populations (Judge et al., 2004; Rey et al., 2016). Cronbach's alpha in this study was 0.78.

2.2.3. Depression, Anxiety, and stress

The DASS-21 (Clark and Watson, 1991) is a set of three self-report scales with seven-item Likert-type scales intended to measure the negative emotional states of depression, anxiety, and stress. Alpha coefficients are all above 0.85 (Lovibond and Lovibond, 1995). The Spanish version has shown satisfactory internal consistency and adequate divergent and convergent validity (Bados et al., 2005). Cronbach's alpha in this study for the three subscales ranged from 0.85 to 0.89.

2.2.4. Happiness

We measured happiness with the Subjective Happiness Scale (SHS) (Lyubomirsky and Lepper, 1999). The SHS is a four-item measurement of global subjective happiness. The SHS has shown high internal consistency, high test-retest and self-peer correlations reliability, and high convergent and discriminant validity. We used a well-validated Spanish version (Extremera & Fernández-Berrocal, 2014). Cronbach's alpha in this study was 0.73.

Table 1

Means, standard deviations, reliabilities and correlations between study variables.

	1	2	3	4	5	6
1. Emotional Intelligence	–					
2. Core Self-Evaluations	.47***	–				
3. Depression	–.38***	–.51***	–			
4. Anxiety	–.29***	–.37***	.77***	–		
5. Stress	–.32***	–.39***	.75***	.73***	–	
6. Happiness	.46***	.55***	–.52***	–.37***	–.37***	–
M	5.05	3.41	0.80	0.64	1.09	4.94
SD	1.00	.62	0.75	0.67	0.71	1.15
Skewness	–0.55	–0.01	0.91	1.16	0.39	–0.29
Kurtosis	0.35	0.15	0.01	0.59	–0.52	2.19
α	0.93	0.78	0.90	0.86	0.85	0.75

N = 1796.

* $P < .05$.** $P < .01$.*** $P < .001$.

3. Results

3.1. Descriptive statistics and correlations

Table 1 shows the descriptive statistics (means, standard deviations, skewness, kurtosis, and reliabilities). As expected, both EI and CSE moderately and negatively correlated with depression, anxiety, and stress, and they positively and significantly related to happiness.

3.2. Hierarchical regression analysis

We conducted a series of hierarchical regression analyses to examine the contribution of EI and CSE alone and in combination in explaining happiness and psychological distress indicators. In the first step of our regression equations, we entered sex, age, marital status, educational level, and length of unemployment as covariates, in addition to the EI and CSE scores. In the second step, in order to reduce the chances of model misspecification when evaluating interactions among correlated predictors (Ganzach, 1997), we entered the squared EI and CSE terms. In the final step, we entered the EI x CSE interaction term. We centered all continuous predictors to reduce potential problems of multicollinearity among the variables (Aiken & West, 1991). To measure the effect size of the predictors accounting for variance in depression, stress, anxiety, and happiness, we used Cohen's (1977) convention for small ($f^2 = 0.02$), medium ($f^2 = 0.15$), and large ($f^2 = 0.35$) effects as a general guide.

As shown in Table 2, the control variables along with EI and CSE accounted for a large ($f^2 = 0.36$) 26.7% of the variance in depression. Within the predictor set, age ($\beta = 0.004^*$, $p < .05$), education level ($\beta = -0.07^{***}$, $p < .001$), marital status ($\beta = -0.024^*$, $p < .05$), length of unemployment ($\beta = 0.001^*$, $p < .05$), EI ($\beta = -0.124^{***}$, $p < .001$), and CSE ($\beta = -0.318^{***}$, $p < .001$) were significant predictors. Squared EI and CSE were found to account for a small ($f^2 = 0.06$) but still significant 0.5% of additional variance in depression. Finally, the EI x CSE term did not account for significant variance. We found the total model accounted for a large ($f^2 = 0.37$) 27% of the variance in depression.

Regarding anxiety, the control variables together with EI and CSE accounted for a medium ($f^2 = 0.17$) 14.4% of the variance. Within the predictor set, education level ($\beta = -0.05^{***}$, $p < .001$), length of unemployment ($\beta = 0.001^{***}$, $p < .001$), EI ($\beta = -0.09^{***}$, $p < .001$), and CSE ($\beta = -0.20^{***}$, $p < .001$) were significant predictors. Neither squared EI and CSE nor the EI x CSE term accounted for a significant variance. We found the total model accounted for a

medium ($f^2 = 0.17$) 14.4% of the variance in anxiety.

With respect to stress, the control variables together with EI and CSE accounted for a medium ($f^2 = 0.20$) 16.9% of the variance. Within the predictor set, education level ($\beta = -0.04^{***}$, $p < .001$), length of unemployment ($\beta = 0.001^*$, $p < .05$), EI ($\beta = -0.12^{***}$, $p < .001$), and CSE ($\beta = -0.22^{***}$, $p < .001$) were significant predictors. Squared EI and CSE accounted for a small ($f^2 = 0.02$) but still significant 0.4% of additional variance. Finally, the EI x CSE term did not account for a significant variance. We found the total model accounted for a medium ($f^2 = 0.21$) 17.3% of the variance in stress.

For happiness, the control variables together accounted for a large ($f^2 = 0.50$) 33.95% of the variance. Within the predictor set, age ($\beta = -0.015^{***}$, $p < .001$), gender ($\beta = 0.12^*$, $p < .05$), education level ($\beta = 0.05^{**}$, $p < .01$), marital status ($\beta = 0.06^{**}$, $p < .01$), EI ($\beta = 0.30^{***}$, $p < .001$), and CSE ($\beta = 0.48^{***}$, $p < .001$) were significant predictors. Squared EI and CSE did not account for a significant additional variance. When we entered the EI x CSE term, we found it accounted for a significant 0.4% of additional variance ($\beta = -0.09^{**}$, $p < .01$). We found the total model to account for a large ($f^2 = 0.52$) 34.0% of the variance in happiness.

To illustrate the EI x CSE interaction for subjective happiness, we followed the procedures Hayes and Matthes (2009) outlined. As shown in Fig. 1, the form of the interaction was as expected. The results of the simple slopes analysis indicated that the association between CSE and happiness was stronger for participants with low levels of EI ($b = 0.92$, $p < .001$) than for participants with high EI ($b = 0.63$, $p < .001$). At low, but not high, levels of CSE, unemployed adults who had lower EI (compared to those higher in EI) reported more subjective happiness. Post hoc analyses showed that the slopes of the two lines were significantly different ($t = 3.41$; $p < .01$). Thus, the beneficial value of CSE appeared to be stronger for participants who had lower EI than for those with higher EI.

4. Discussion

We designed the current study to examine the interplay between EI, CSE, happiness, and psychological distress symptoms in a relatively large sample of unemployed adults. Consistent with past research (McKee-Ryan et al., 2005; Moore et al., 2017; Rey et al., 2016), our findings suggest that positive resources, such as EI and CSE, showed unique and significant value as predictors of positive (happiness) and negative (depression, stress, and anxiety) psychological outcomes among unemployed adults. Particularly, we found that after controlling for relevant socio-demographic variables, EI and CSE were negative predictors of depression, anxiety and stress, and positive predictors of happiness. In line with Creed et al. (2009) study, we also found that length of unemployment was a significant predictor of anxiety, in the three steps of regression. One might explain this effect by the significant increase of tension, preoccupation, and depletion of coping resources as financial burdens, caused by a job loss, increase (Prussia et al., 2001). A new, fruitful line of future research would be to examine if EI and/or CSE might buffer the adverse consequences of length of unemployment on mental health problems.

The most important finding from this study is that EI and CSE showed a significant interaction effect, which adds further incremental validity to the predictions of happiness beyond the main effect of EI and CSE. Both patterns of interaction suggest the idea that unemployed adults with higher levels of CSE, both in groups of people with lower and higher EI, are more likely to have higher happiness levels. However, we found this pattern to be stronger among those with lower EI than those with higher EI. Therefore, if future researchers replicate the study, these findings provide some new insight that developing emotional abilities in promoting well-being during unemployment might be more effective among unemployed adults who experience negative self-regard (vs. positive self-regard). Additionally, by assessing for both positive and negative outcomes among the unemployed, we

Table 2

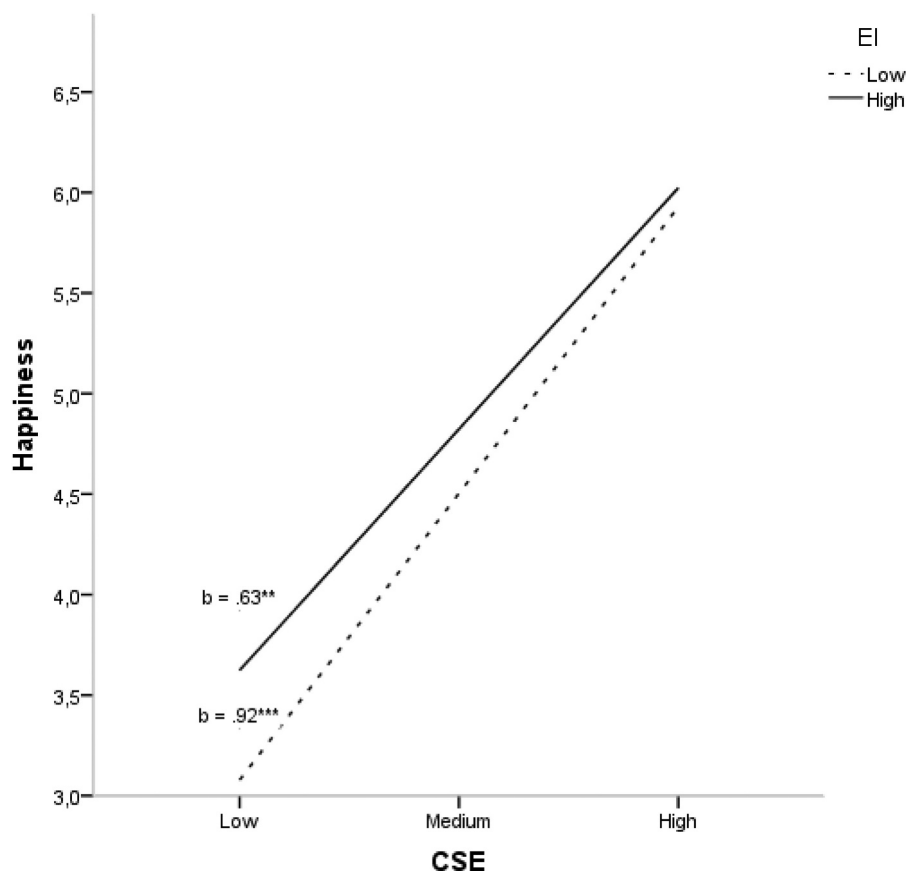
Standardized regression coefficients for control variables, EI, CSE, EI squared, CSE squared and the interaction of EI x CSE as predictors of psychological adjustment.

	Depression			Anxiety			Stress			Happiness		
	Step 1 β	Step 2 β	Step 3 β	Step 1 β	Step 2 β	Step 3 β	Step 1 β	Step 2 β	Step 3 β	Step 1 β	Step 2 β	Step 3 β
Step 1												
Age	.004*	.000	.000	.000	−0.002	−0.002	−0.003	−0.005**	−0.005**	−0.015***	−0.009***	−0.009***
Gender	−0.031	−0.060*	−0.060*	.009	−0.013	−0.013	.022	−0.007	−0.007	0.117*	.160***	.158***
Education Level	−0.068***	−0.041***	−0.041***	−0.046***	−0.028**	−0.027**	−0.043***	−0.024*	−0.024*	0.049**	.001	.004
Marital Status	−0.024*	−0.010	−0.010	−0.009	.002	.002	−0.002	.009	.009	0.062**	.037*	.039***
Length of unemployment	.001**	.000	.000	.001***	.001**	.001**	.001*	.001	.001	−0.001	−0.001	.000
EI	−0.124***	−0.115***	−0.115***	−0.094***	−0.089***	−0.090***	−0.118***	−0.133***	−0.133***	0.300***	.292***	.291***
CSE	−0.318***	−0.320***	−0.321***	−0.201***	−0.202***	−0.202***	−0.223***	−0.220***	−0.220***	0.479***	.481***	.482***
Step 2												
EI squared		0.013	0.010		0.008	.012		−0.023*	−0.025*		−0.012	0.015
CSE squared		0.033**	0.029*		−0.006	.000		−0.016	−0.018		−0.014	0.022
Step 3												
EI x CSE			0.009			−0.014			.006			−0.091**
F	330.67***	6.81**	0.21	149.55***	0.34	0.58	179.27***	4.13*	0.92	458.63***	0.94	10.86**
R ²	0.295	0.299	0.299	0.160	0.160	0.160	0.178	0.181	0.181	0.361	0.361	0.365
R ² Δ	0.267	0.005	0.000	0.144	0.000	0.000	0.169	0.004	0.000	0.335	0.001	0.004

* $P < .05$.** $P < .01$.*** $P < .001$.

were able to clarify how EI specifically amplifies the positive effects of CSE on positive indicators (e.g., subjective happiness), but not on negative outcomes (e.g., stress, depression and anxiety symptoms). However, since subjective happiness, as assessed by SHS, represents an overall subjective account of one's happiness (Lyubomirsky and Lepper, 1999), and since psychological symptoms, measured by DASS-21, reflect temporary negative emotional states, usually in the last

week, examining the effects of EI and CSE dimensions for predicting the outcomes of other measures of temporal subjective well-being would be necessary (e.g., PANAS) (Watson et al., 1988), as would taking into consideration the potential peculiarities of using instruments assessing more severe and long-lasting psychological symptoms or different conceptions of well-being (e.g., hedonic vs. and eudemonic aspects) (Ryan and Deci, 2001). Future researchers should evaluate if the EI and

**Fig. 1.** Interaction of CSE and EI in predicting Happiness.Note: * $p < .05$; ** $p < .01$.

CSE interaction might boost the positive effects of temporal well-being, might buffer the negative effects of long-lasting psychological symptoms, or both. Thus, our findings cast new light on previously published data suggesting the potential importance of identifying personal resources and of elaborating prediction models that might be specific to more positive psychological outcomes during unemployment (McKee-Ryan et al., 2005; Milner et al., 2013). Additionally, while prior researchers have examined the separate and individual influence of personal resources that many believe lead to higher well-being and lower psychological adjustment (e.g., Wanberg, 2012), our data underline the need to consider the comparative contributions of these two protective factors that might impact well-being. When working with unemployed people at high risk for reduced well-being, helping them develop emotional abilities and/or being more confident in their own abilities might be useful to protect them from mental health problems during their unemployment.

These findings have important implications for the current understanding of deficits in psychological distress derived from unemployment. First, identifying unemployed adults who lack personal protective factors for depression, anxiety, and stress would be useful for counseling professionals to potentially reduce the risk of psychological maladjustment. For instance, within a comprehensive and successfully mental health promotion program, counselors should use screening tests for the absence of protective factors such as CSE and EI in addition to the routine assessment of mental health problems. Thus, administering a screening of mental-health risk and protective factors could help both therapists and researchers to efficiently identify unemployed adults who might be at risk for psychological distress, which subsequently might help therapists to develop effective clinical formulations that help guide prevention programs and devising of treatments. Second, according to our interaction findings, counseling professionals might offer EI intervention programs for unemployed people who have negative individual self-concepts and who are at risk for developing unhappiness during unemployment. For instance, Hodzic et al. (2015) found that unemployed adults participating in an EI-based intervention program, compared with a control group, showed lower perceived stress, confusion, and somatic complaints and higher mental health and vigor six months after the intervention.

We must address some limitations in the current study. First, due to the cross-sectional nature of our study, we cannot draw causal conclusions based on these findings. Therefore, in prospective studies researchers would need to examine the potential contribution of both personal resources in predicting psychological maladjustment derived from unemployment across time. Second, in our study we employed a non-clinical sample of unemployed adults, so the results might not generalize to the clinical population. Undoubtedly, the field needs future studies to test this interactive model in clinical samples. Third, our study relies only on self-report measures, which might include biases such as social desirability and common method variance. Future researchers should replicate these findings using EI measures or collecting data from clinical structured or semi-structured interviews. Fourth, our study did not include a comparison group; thus, if the patterns found among unemployed people would be any different among the employed or other groups is unclear. Fifth, we did not account for potential confounding factors influencing wellbeing, such as personality traits, self-efficacy, or cognitive ability. Joseph et al. (2015) found that these factors explain the association between EI measures and job performance among employed individuals. Future researchers should replicate these findings using ability EI measures, collecting data from clinical structured or semi-structured interviews, including personality and self-efficacy variables, and comparing employed and unemployed samples.

Although this research is exploratory in examining the interactive role of EI and CSE, we used a total score of EI rather than specific EI factors, which future researchers should examine. Consequently, exploring to see if the obtained pattern of our findings also emerges when

examining different EI facets would be important. Also, our findings are based on unemployed people in the context of Spain, so determining whether the present findings are generalizable to unemployment in other cultural settings would be useful. Additionally, beyond the interplay of EI and CSE, future researchers might consider other psychosocial factors. For instance, studies have shown that unemployed with low optimism (Duffy et al., 2013) and low openness to experience, conscientiousness, and high neuroticism (Van Hove and Lootens, 2013) report lower levels of well-being. Therefore, future researchers should determine if similar buffering effects emerge when examining other key constructs, such as optimism and the big-five factors as moderators in the relationship between EI and well-being among unemployed people.

Despite the mentioned limitations, our study provides promising empirical evidence for the interactive effects of EI and CSE in increasing well-being during unemployment. In addition, if future researchers replicate these findings, such would shed light on promoting a positive psychology model of prevention, including positive self-regard and EI abilities, and this would be a promising way to promote positive mental health to help people better cope with hindrances, such as employment difficulties and other key stressors and challenges during unemployment.

Conflict of interest

The authors declare no conflict of interest in this article.

CRediT authorship contribution statement

María Angeles Peláez-Fernández: Writing - original draft, Methodology, Formal analysis. **Lourdes Rey:** Funding acquisition, Writing - review & editing, Supervision. **Natalio Extremera:** Methodology, Resources, Supervision.

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