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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 × 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.

Keywords: Unemployment Emotional intelligence Psychological distress Well-being Core self-evaluation

Introduction

Unemployment constitutes a significant economic and public health problem in the European Union. As reported by Eurostat and INE, the highest unemployment rates were detected in Greece (20.6%) and Spain (16.1%; Eurostat Unemployment Database, 2018) with 3,304,300 unemployed (INE, Instituto Nacional de Estadística, 2018). It is well documented that, during periods of economic recession, the prevalence of mental illness, distress, depression, and suicide increase alarmingly (Chang, Stuckler, Yip, & Gunnell, 2013; Fitch, Hamilton, Bassett, & Davey, 2011; Haw, Hawton, Gunnell, & Platt, 2015; Katikireddi, Niedzwiedz, & Popham, 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; Wanberg, 2012), levels of psychological well-being tend to decrease, and mental health-related symptoms such as anxiety and depression tend to appear (Winkelmann & Winkelmann, 1998). Therefore, interventions to help alleviate the consequences of unemployment on well-being are a key component of policy response to cycles of recession. For instance, a recent systematic review of interventions to reduce the psychosocial impact of unemployment 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 2 years post-intervention (Moore et al., 2017). Accordingly, other studies have pointed out that interventions including both dispositional and social dimensions to help cope with job loss would reduce psychological distress (Latack, Kinicki, & Prussia, 1995; McKee-Ryan & Kinicki, 2002) and boost psychological well-being during unemployment (McKee-Ryan, Song, Wanberg, & Kinicki, 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, Roberts, & Barsade, 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 & Salovey, 1997). Research on EI has focused on examining the role of emotional abilities as a predictor of health correlates (Keefer, Parker, & Saklofske, 2009; Woolery & 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 (Van Heck & Den Oudsten, 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 play a central role in unemployment, contributing to positive well-being (Hodzic, Ripoll, Bernal, & Zenasni, 2015; Extremera & Rey, 2016; Berrios, Extremera, & Nieto-Flores, 2016).

Beyond EI, another personal resource that has been 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, Erez, Bono, & Thoresen, 2003). CSE has been characterized by four personality aspects: self-esteem, self-efficacy, locus of control, and emotional stability (Judge et al., 2003; Yu, 2016). Prior research has indicated that CSE is a significant predictor of fewer mental health problems and greater well-being. Moreover, CSE has been found to be a significant predictor of positive coping strategies during unemployment (Virkes, Seršić, & Lopez-Zafra, 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, it would be important to examine the confluence of EI and CSE, as the interaction of EI and CSE together might be more predictive of emotional maladjustment during unemployment than 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, Judge, & Scott, 2009; Rey, Extremera, & Peláez-Fernández, 2016). Research on EI indicate that individuals who report low emotional abilities may 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, Corser & Dalsky, 2005; Salguero, Extremera, Cabello & Fernández-Berrocal 2015). Therefore, low EI might be associated with lower well-being in unemployed, especially among those with low EI and low CSE. On contrary, high EI might be related to high well-being in 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 high vs. low 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, there are no studies that have examined the contributive role of EI with other form of self-efficacy, such as CSE, as interactive predictors of positive and negative outcomes in an at-risk adult population (e.g., the unemployed).

The main aim of this study was to examine the potential role of EI and CSE in the prediction of indicators of well-being (happiness) and symptoms of psychological distress

(depression, anxiety, stress) in this population. We had four specific objectives: 1) to examine the relations 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 examine if the inclusion of CSE would significantly add to the prediction of additional unique variance beyond what can be accounted for by EI in predicting health indicators, and 4) to explore whether there was a significant EI x CSE interaction that would account for further unique variance in predicting well-being and psychological distress outcomes beyond socio-demographic variables and main effects. Based on the aforementioned findings, EI and CSE were expected to be positively related to happiness and negatively related to depression, anxiety, and stress. EI was predicted to 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 there would be a significant EI x CSE interaction in predicting outcomes.

Method

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 was composed of 1,796 participants (958 women). 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).

Measures

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

Core Self-Evaluations Scale (CSES; Judge, Erez, Bono, & Thoresen, 2003). The CSES is a 12-item scale intended to measure the underlying self-evaluative factor that is present across the four more specific traits of 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.

Depression, Anxiety, and Stress. The DASS-21 (Clark & 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 & Lovibond, 1995). The Spanish version has showed satisfactory internal consistency and adequate divergent and convergent validity (Bados, Solanas, & Andrés, 2005). Cronbach's alpha in this study for the three subscales ranged from 0.85 to 0.89.

Happiness. Happiness was measured with the Subjective Happiness Scale (SHS; Lyubomirsky & 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.

Results

Descriptive Statistics and Correlations

Descriptive statistics (means, standard deviations, skewness, kurtosis and reliabilities) are provided in Table 1. As expected, both EI and CSE were moderately and negatively correlated with depression, anxiety, and stress and positively and significantly related to happiness.

<Insert Table 1>

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, sex, age, marital status, educational level, and length of unemployment were entered as covariates, besides 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), squared EI and CSE terms were entered. The EI x CSE interaction term was entered in the final step. 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 ($f^2 = .02$), medium ($f^2 = .15$), and large effects ($f^2 = .35$) as a general guide.

As shown in Table 2, the control variables along with EI and CSE accounted for a large ($f^2 = .36$) 26.7% of the variance in depression. Within the predictor set, age ($\beta = .004^*$, $p < .05$), education level ($\beta = -.07^{***}$, $p < .001$), marital status ($\beta = -.024^*$, p

< .05), length of unemployment ($\beta = .001^*$, $p < .05$), EI ($\beta = -.124^{***}$, $p < .001$), and CSE ($\beta = -.318^{***}$, $p < .001$), were significant predictors. Squared EI and CSE were found to account for a small ($f^2 = .06$) but still significant 0.5% of additional variance in depression. Finally, the EI x CSE term did not account for significant variance. The total model was found to account for a large ($f^2 = .37$) 27% of the variance in depression.

Regarding anxiety, the control variables together with EI and CSE accounted for a medium ($f^2 = .17$) 14.4% of the variance. Within the predictor set, education level ($\beta = -.05^{***}$, $p < .001$), length of unemployment ($\beta = .001^{***}$, $p < .001$), EI ($\beta = -.09^{***}$, $p < .001$), and CSE ($\beta = -.20^{***}$, $p < .001$), were significant predictors. Neither squared EI and CSE nor the EI x CSE term accounted for significant variance. The total model was found to account for a medium ($f^2 = .17$) 14.4% of the variance in anxiety.

With respect to stress, the control variables together with EI and CSE accounted for a medium ($f^2 = .20$) 16.9% of the variance. Within the predictor set, education level ($\beta = -.04^{***}$, $p < .001$), length of unemployment ($\beta = .001^*$, $p < .05$), EI ($\beta = -.12^{***}$, $p < .001$), and CSE ($\beta = -.22^{***}$, $p < .001$), were significant predictors. Squared EI and CSE were found to account for a small ($f^2 = .02$) but still significant 0.4% of additional variance. Finally, the EI x CSE term did not account for significant variance. The total model was found to account for a medium ($f^2 = .21$) 17.3% of the variance in stress.

For happiness, the control variables together accounted for a large ($f^2 = .50$) 33.95% of the variance. Within the predictor set, age ($\beta = -.015^{***}$, $p < .001$), gender ($\beta = .12^*$, $p < .05$), education level ($\beta = .05^{**}$, $p < .01$), marital status ($\beta = .06^{**}$, $p < .01$), EI ($\beta = .30^{***}$, $p < .001$), and CSE ($\beta = .48^{***}$, $p < .001$) were significant predictors. Squared EI and CSE did not account for significant additional variance. When the EI x CSE term was entered, it was found to account for a significant 0.4% of additional

variance ($\beta = -.09^{**}$, $p < .01$). The total model was found to account for a large ($f^2 = .52$) 34.0% of the variance in happiness.

<Insert Table 2>

To illustrate the EI x CSE interaction for subjective happiness, we followed the procedures outlined by Hayes and Matthes (2009). As shown in Figure 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 ($b = .92$, $p < .001$) in comparison with participants with high EI ($b = .63$, $p < .001$). At low, but not high, levels of CSE, unemployed adults lower in 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 lower in EI than for those higher in EI.

<Insert Figure 1>

Discussion

The current study was designed 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 have 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 previous studies (Creed, Lehman and Hood, 2009), we also found that length of unemployment was a significant predictor of anxiety,

in the three steps of regression. This effect might be explained by the significant increase of tension and preoccupation and the depletion of coping resources as financial burden caused by job loss increases (Prussia, Fugate, & Kinicki, 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 of 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 happiness is likely to be increased at higher levels of CSE in unemployed adults, both in lower and higher EI groups. However, this pattern was found to be stronger among those with lower EI than those with higher EI. Therefore, if replicated in further research, 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 in unemployed, we were able to clarify how emotional intelligence 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 & Lepper, 1999) and psychological symptoms, measured by DASS-21, reflect temporary negative emotional states, usually in the last week, it would be necessary to examine the effects of EI and CSE dimensions for predicting the outcomes of other measures of temporal subjective well-being (e.g., PANAS, Watson et al., 1988), or even to take 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 eudaimonic aspects) (Ryan & Deci 2001). Future work should be conducted to evaluate if EI and 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 potential importance of identifying personal resources and elaborating prediction models that may be specific to positive, compared to negative, psychological outcomes during unemployed (McKee-Ryan et al., 2005; Milner, Page & LaMontagne 2013). Additionally, while prior studies have examined the separate and individual influence of personal resources that are believed to lead to higher well-being and lower psychological adjustment (e.g., Wanberg, 2012), our data underline the need to consider comparative contributions of these two protective factors that might impact on well-being. Working with unemployed at high risk for reduced well-being, it may be useful to help them develop emotional abilities and/or being more confident in their own abilities to protect them from mental health problem during unemployment.

These findings have important implications for the current understanding of deficits in psychological distress derived from unemployment. First, it would be useful for counseling professionals to identify unemployed adults who lack personal protective factors for depression, anxiety, and stress 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 treatment. Second, according to our interaction findings, counseling professionals might offer EI intervention programs for unemployed people with negative individual self-concepts 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 6 months after the intervention. Some limitations in the current study should be addressed. First, due to the cross-sectional nature of our study, we cannot draw causal conclusions based on these findings. Therefore, prospective studies would be needed to examine the potential contribution of both personal resources in predicting psychological maladjustment derived from unemployment across time. Second, our study has employed a non-clinical sample of unemployed adults, so the results might not generalize to the clinical population. Undoubtedly, future studies testing this interactive model in clinical samples are needed. 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. Forth, our study did not include a comparison group; thus, it is unclear whether the patterns found among unemployed would be any different than in the employed or other groups. Fifth, this study did not include for potential confounding factors influencing on wellbeing such as personality traits, self-efficacy or cognitive ability. For instance, these factors have showed to explain the association between EI measures and job performance among employed individuals (Joseph, Jin, Newman and O'Boyle, 2015). 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 should be examined in further studies. Consequently, it would be important to explore if the obtained pattern of our findings also emerges when different EI facets are examined. Also, our findings are based on Spanish unemployed, so it would be useful to determine whether the present findings are generalizable to unemployment from other cultural backgrounds. Besides, beyond the interplay of EI and CSE, other psychosocial factors might be considered in further research. For instance, studies have shown that unemployed with low optimism (Duffy, Bott, Allan, & Torrey, 2013) and low openness to experience, conscientiousness, and high neuroticism (Van Hove, & Lootens, 2013) report lower well-being. Therefore, new avenues for further research should determine if similar buffering effects would emerge when examining other key constructs, such as optimism and Big-five factors, as moderators in the relationship between EI and well-being in unemployed.

Despite 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 these findings are replicated in further studies, this sheds light on promoting a positive psychology model of prevention including positive self-regard and emotional intelligence abilities and as a promising way to promote positive mental health to better cope with hindrances, 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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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	.80	.64	1.09	4.94
SD	1.00	.62	.75	.67	.71	1.15
Skewness	-.55	-.01	.91	1.16	.39	-.29
Kurtosis	.35	.15	.01	.59	-.52	2.19
α	.93	.78	.90	.86	.85	.75

$N = 1796$.

* $P < 0.05$.

** $P < 0.01$.

*** $P < 0.001$

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.

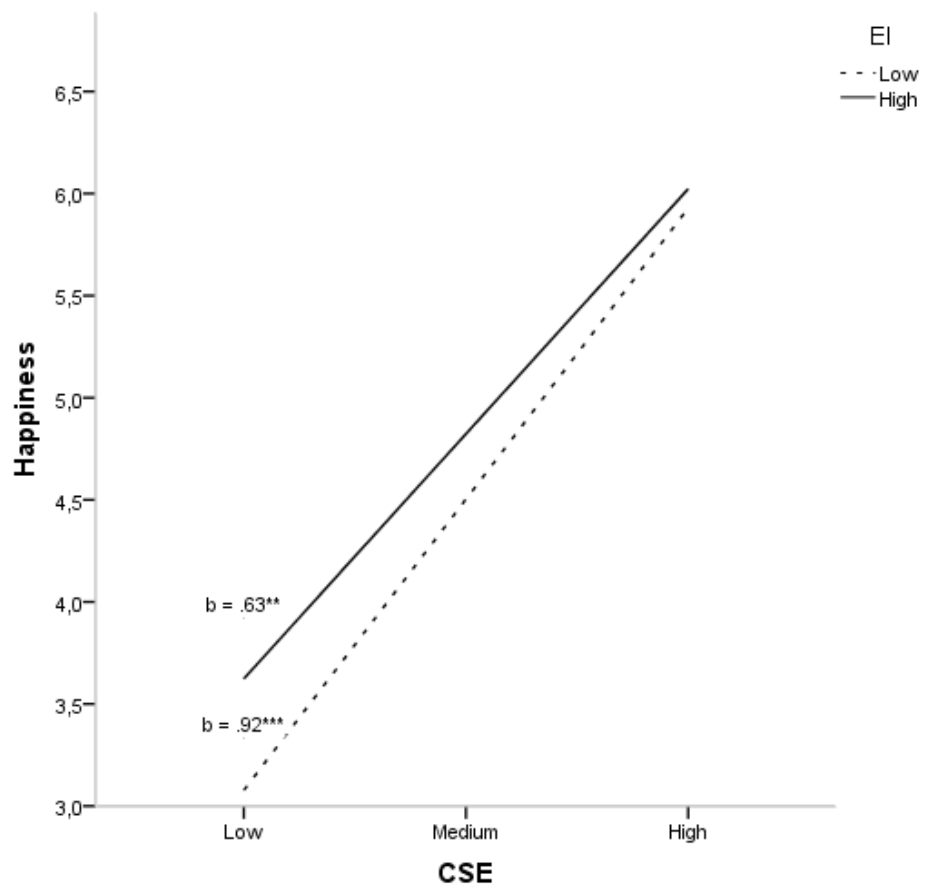
	Depression			Anxiety			Stress			Happiness		
	Step 1 β	Step 2 β	Step 3 β	Step 1 β	Step 2 β	Step 3 β	Step 1 β	Step 2 β	Step 3 β	Step 1 β	Step 2 β	Step 3 β
Step 1												
Age	.004*	.000	.000	.000	-.002	-.002	-.003	-.005**	-.005**	-.015***	-.009***	-.009***
Gender	-.031	-.060*	-.060*	.009	-.013	-.013	.022	-.007	-.007	.117*	.160***	.158***
Education Level	-.068***	-.041***	-.041***	-.046***	-.028**	-.027**	-.043***	-.024*	-.024*	.049**	.001	.004
Marital Status	-.024*	-.010	-.010	-.009	.002	.002	-.002	.009	.009	.062**	.037*	.039**
Length of unemployment	.001*	.000	.000	.001***	.001**	.001**	.001*	.001	.001	-.001	-.001	.000
EI	-.124***	-.115***	-.115***	-.094***	-.089***	-.090***	-.118***	-.133***	-.133***	.300***	.292***	.291***
CSE	-.318***	-.320***	-.321***	-.201***	-.202***	-.202***	-.223***	-.220***	-.220***	.479***	.481***	.482***
Step 2												
EI squared		.013	.010		.008	.012		-.023*	-.025*		-.012	.015
CSE squared		.033**	.029*		-.006	.000		-.016	-.018		-.014	.022
Step 3												
EI x CSE			.009			-.014			.006			-.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**
R²	0.295	0.299	0.299	0.160	0.160	0.160	0.178	0.181	0.181	0.361	0.361	0.365
R²Δ	0.267	0.005	0.000	0.144	0.000	0.000	0.169	0.004	0.000	0.335	0.001	0.004

* $P < 0.05$.

** $P < 0.01$.

*** $P < 0.001$.

Figure 1. Interaction of CSE and EI in predicting Happiness



Note: * $p < .05$; ** $p < .001$