



Short Communication

Ability emotional intelligence and life satisfaction: Positive and negative affect as mediators

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ABSTRACT

The present study examined the link between ability emotional intelligence (EI), positive and negative affect, and life satisfaction in a relatively wide sample of 721 Spanish undergraduate students. Data were collected using the Mayer-Salovey-Caruso Emotional Intelligence Test, the Positive and Negative Affect Schedule, and the Satisfaction with Life Scale. Correlational results indicated that ability EI was significantly and positively associated with life satisfaction and positive affect, and inversely with negative affect. Thus, positive and negative affect were significantly associated with life satisfaction in the expected way. Importantly, path analyses indicated that both positive and negative affect played a fully mediating role in the link between EI and life satisfaction. These results add to the small but growing literature about EI, assessed by a performance-based measure, and well-being, and encourage further research about affective processes by which these emotional skills influence diverse well-being outcomes.

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1. Introduction

Over the past two decades, scholars and practitioners have become increasingly interested in studying emotional intelligence (EI) and its implications for important life outcomes. Accordingly, findings from diverse recent meta-analytic research have documented that EI is an important factor in both mental health and well-being criteria (Martins, Ramalho, & Morin, 2010; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2016; Schutte, Malouff, Thorsteinsson, & Rooke, 2007). Currently there are two predominant models of EI: trait and ability models (Mayer, Roberts, & Barsade, 2008). While trait models describe EI as a broader conception of intelligence that combines social skills, traits, and dispositional behavior, ability models defined EI as a set of skills, such as the ability to perceive emotions, to access and generate emotions, to understand emotions, and to reflectively regulate emotions. These emotional abilities are considered to play a key role in promoting positive emotions and might even help to increase people's global cognitive evaluation of their satisfaction with their own lives (Sánchez-Álvarez et al., 2016). For example, previous studies, using EI performance measures, have found a weak to moderate association of ability EI with life satisfaction, after controlling for other socio-emotional variables, cognitive intelligence, and personality traits (Mayer, Caruso, & Salovey, 1999). More recent work has reported modest associations between ability EI and life satisfaction both in cross-sectional (Brackett, Rivers, Shiffman, Lerner, & Salovey 2006) and

prospective design (Extremera, Ruiz-Aranda, Pineda-Galán, & Salguero, 2011). Nevertheless, although previous research has documented the positive relationship between ability EI and life satisfaction, the identification of additional variables that mediate the above relationship will help researchers determine the mechanisms through which EI affects well-being. Some authors have suggested that this relationship might be mediated by affective processes, among others (Kong & Zhao, 2013; Sánchez-Álvarez, Extremera, & Fernández-Berrocal, 2015). Accordingly, two important factors that may mediate the link between EI and life satisfaction are positive and negative affect.

1.1. Positive and negative affect and life satisfaction

Past theoretical and empirical work has examined the associations between affectivity and life satisfaction (Schimmack, 2008). Following the affect-as-information perspective (Schwarz & Clore, 2007), people typically rely on their affect balance to form judgments of how satisfied they are with their lives. In fact, prior research has confirmed a positive correlation between positive affect and life satisfaction and an inverse association between negative affect and life satisfaction (Kuppens, Realo, & Diener, 2008). Furthermore, previous experimental and cross-cultural evidence has confirmed that affectivity has a causal influence on life satisfaction judgments (Kuppens et al., 2008; Schwarz & Clore, 2007).

As EI is a mental ability to process affective information, emotional skills may change the balance of affective experiences from negative to positive, leading to higher life satisfaction (Zeidner, Matthews, & Roberts, 2012). That is, EI has been theorised to be critical for effective emotional and social functioning, conferring enhanced positive affect

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and reduced negative affect and may serve as a precursor to attaining increased levels of life satisfaction. Accumulating research literature has confirmed the mediator role of affectivity between self-reported EI and life satisfaction both in undergraduate (Kong & Zhao, 2013) and adolescent samples (Sánchez-Álvarez et al., 2015), however, the contribution of these findings to our understanding of EI and life satisfaction is quite limited because these studies have exclusively relied on EI self-report measures that do not directly tap people's emotional skills and might substantially increase variance unrelated to emotional processing (Brackett et al., 2006). In fact, recent meta-analysis has confirmed that the magnitude of the relationship between EI and well-being dimensions is measure dependent, as these criteria outcomes are more strongly correlated with trait (self-report) than with ability (performance) measures of EI (Sánchez-Álvarez et al., 2016). Using EI performance measures to identify further emotional processes associated with EI that may increase life satisfaction not only would mitigate problems associated with common methods variance but also would provide a stringent test of the practical importance of ability EI as a predictor of well-being outcomes.

Based on the available evidence on the significant associations between ability EI, affectivity and life satisfaction, we hypothesized that: (1) ability EI will be positively related to life satisfaction and positive affect and inversely related to negative affect; (2) positive affect would mediate the association between EI and life satisfaction and (3) negative affect would mediate the association between EI and life satisfaction.

2. Method

2.1. Participants and procedure

The participants were 721 undergraduate students from a southern university of Spain (206 males; 512 females; 3 unreported) who were told that their participation was completely voluntary and confidential and that they would receive extra credit towards their course grade. Their mean age was 21.81 years ($SD = 5.27$). With respect to ethnicity, all participants were White/Caucasian.

2.2. Measures

2.2.1. Emotional intelligence

The Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT v.2.0; Mayer, Salovey, & Caruso, 2002) is a 141-item ability scale designed to measure the four branches of Mayer and Salovey's theory of EI. The MSCEIT yields a total emotional intelligence score; the four branch scores comprise this total score, providing an overall index of the respondent's emotional intelligence (Mayer et al., 2002). Since previous research has found high correlations between the overall and branch scores (Brackett & Mayer, 2003), in the present study we used overall EI scores as a global construct.¹ EI was measured using a well-validated Spanish version of MSCEIT (Sánchez-García, Extremera, & Fernández-Berrocá, in press). In the present sample, the internal reliability for total scale was .89.

2.2.2. Affect and negative affect. Positive and negative affect schedule

Positive and Negative affect was measured by Positive and Negative Affect Schedule (PANAS) which is a 20-item self-report measure, with 10 items assessing for positive affect and 10 items for negative affect (Watson, Clark, & Tellegen, 1988). Respondents are asked to rate how they feel for each item across a 5-point Likert-type scale. The Spanish

PANAS was used in this study (Sandin et al., 1999). In this study, the reliabilities for the positive and negative affect scales were 0.83 and 0.85, respectively.

2.2.3. Satisfaction with life

Satisfaction with life was measured by Satisfaction with life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985). This scale comprises five self-referencing statements on global life satisfaction. Participants completed the Spanish version of the SWLS (Atienza, Balaguer, & García-Merita, 2003). In the present study, the alpha coefficient for the SWLS was 0.84.

3. Results

3.1. Descriptive analyses

Pearson correlations, means, and standard deviations of the different scales are presented in Table 1. As expected, ability EI was significantly and positively correlated with positive affect and life satisfaction and negatively correlated with negative affect. In addition, positive affect was positively and moderately related to life satisfaction and negative affect was negatively and significantly related to life satisfaction.

3.2. Multiple mediation analysis

In order to examine the mediator role of positive and negative affect in the relationship between EI and life satisfaction, we used the procedure described by Preacher and Hayes (2008). To avoid the possibility that associations between EI and life satisfaction could be confounded by socio-demographic factors, we also controlled for age and gender in the subsequent analysis. Then, using the estimates on the basis of these 5000 bootstrap samples, the mean direct and indirect effects and their confidence intervals (CIs) are calculated. These CIs are used to determine whether each effect is statistically significant. For each effect, we examined the 95% CI, and if the value of 0 did not fall within the range of the CI for that effect, then the finding was statistically significant at $p < 0.05$.

Table 2 summarizes the results for the multiple mediator analysis, indicating the path coefficients and confidence intervals for each effect being tested in the model. The results show significant indirect mediating effects for positive and negative affect. It should be noted that the pathways described by these mediators fully accounted for the relation between EI and life satisfaction given that the pathway for the direct effect in this analysis was not statistically significant. Taken together, results showed that greater EI was associated significantly with higher levels of positive affect and lower levels of negative affect, which, in turn, predicted higher levels of life satisfaction.

4. Discussion

Recent meta-analytic research on EI has found a significant relationship with health and well-being. However, we know little about the affective processes through which EI operates in well-being, with most

Table 1
Means, standard deviations, Cronbach's alpha and intercorrelations among measures.

Variables	Mean	SD	1	2	3	4
1. Ability EI	99.90	14.36	–			
2. Positive affect	3.51	0.60	0.11**	–		
3. Negative affect	2.25	0.73	–0.19**	–0.18**	–	
4. Life satisfaction	4.97	1.09	0.13**	0.40**	–0.34**	–

** $p < 0.01$.

¹ Additional analyses confirmed the existing pattern of high relationships described in prior work (from 0.65 to 0.79 with overall EI; see Brackett & Mayer, 2003). Similarly, in our study associations ranging from 0.62 (for understanding) to 0.76 (for perception) between overall EI score and EI branches. These high correlations suggested the use of overall EI scores in our study. Due to the dearth of research focused on the EI branches, positive and negative affect and life satisfaction, developing branch-based hypotheses is outside the scope of this paper.

Table 2

Path coefficients and confidence intervals of mediational analyses, controlling for age and gender.

Independent variable (IV)	Mediating variable (M)	Dependent variable (DV)	Effect of IV on M	Effect of M on DV	Direct effect	Indirect effect	99% CI for indirect effect	Total effect
Ability EI	PA	Life satisfaction	0.00**	0.64**	0.003	0.007**	0.001 to 0.006	0.011**
	NA		−0.01**	−0.40**		0.003**	0.002 to 0.007	

Note: Estimated using bias corrected and accelerated bootstrapping, with 5,000 samples. CI = confidence interval.

PA = Positive affect; NA = Negative affect.

** $p < 0.01$.

studies using self-report measures, which may be biased by self-appraisals (Martins et al., 2010; Sánchez-Álvarez et al., 2016).

In line with previous meta-analytic findings, ability EI, measured by performance test, showed a small (albeit significant) and positive correlation with life satisfaction (Sánchez-Álvarez et al., 2016). Furthermore, ability EI was also found to show low but significant associations with both positive and negative affect. These results are consistent with earlier work showing significant low to moderate associations with positive and negative affect, but in lower magnitude compared with studies using EI self-report measures, which might be biased by common method construct variance (Sánchez-Álvarez et al., 2016). Moreover, positive affect and negative affect showed significant association with life satisfaction in line with affect-as-information perspective (Schwarz & Clore, 2007).

Finally, we investigated whether positive and negative affect serve as potential mediators between ability EI and life satisfaction. Our results showed that positive and negative affect fully mediated the relationship between EI and life satisfaction. In short, our findings suggest that increased positive affect and reduced negative affect might be mechanisms through which EI impacts upon life satisfaction judgments. In other words, people with high EI might be satisfied with their lives because they are able to frequently experience pleasant or positive emotions and/or because they infrequently experience unpleasant or negative emotions.

These results provide preliminary evidence supporting the view that ability EI might lead to enhanced life satisfaction through affectivity. Our findings are in line with the principles of positive psychology that consider positive experience as an important route to greater life satisfaction (Sin & Lyubomirsky, 2009). Nevertheless, these findings may be valuable not only for developing comprehensive theoretical models on mediating process and for understanding better the link between ability EI and well-being (Zeidner et al., 2012), but also for developing more effective EI intervention programs. Because individuals derive enhanced life satisfaction in a number of ways, it is necessary to understand how these different routes might be fostered. Accordingly, EI programmes aimed at heightening positive affect and reducing the disposition to experience adverse emotional states might be particularly useful in increasing how satisfied one is with one's life. As emotional abilities and affectivity tend to be more amenable to a psychosocial approach, people might be taught how to employ specific strategies for reducing negative moods and increasing positive ones; this in turn might help them to increase their global level of life satisfaction.

Our novel findings must be understood in the context of limitations. First, the cross-sectional nature of the present study suggests that caution is warranted when making any strong causal inferences. Although previous research has shown that EI abilities precede changes in affect and life satisfaction (Extremera et al., 2011) and affectivity has a causal influence on life satisfaction judgments (Kuppens et al., 2008), longitudinal studies are needed to understand better the interrelationships between ability EI, affectivity and life satisfaction. Second, since our sample was a fairly homogeneous group, composed of undergraduates, mostly of women and young adults, results may not be generalized for other sample groups. Moreover, additional research could also focus more extensively on which specific emotional abilities are more important in influencing affectivity and life satisfaction judgments.

Notwithstanding the above-mentioned limitations, our results offer further support to the literature that underlines the role of EI as a significant predictor of well-being, extending the results to EI performance measures. Besides the already acknowledged links with EI, affect, and life satisfaction that are based on self-reports, associations that refer to emotional processing abilities, such as examined here with a performance-based measure of EI, may form an additional way through which affectivity is related to life satisfaction. Our findings have provided further support for the ability EI approach, increasing our understanding of the role of emotional abilities and affectivity in the construction of life satisfaction judgments.

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