Emotional intelligence and its relation with hedonic and eudaimonic well-being: A prospective study

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ABSTRACT

The primary aim of the current study was to replicate and extend previous findings by examining the relationship between emotional intelligence abilities and levels of hedonic and eudaimonic well-being in a 12-week follow-up study. Participants were 349 undergraduate students who completed an ability measure of emotional intelligence (MSCEIT), personality questionnaires, and hedonic and eudaimonic well-being measures at time 1. After 12 weeks, participants repeated the hedonic and eudaimonic measures at time 2. Focusing first on cross-sectional analysis, we found emotional intelligence scores to be moderately and significantly related to hedonic and eudaimonic well-being measures. Next, we found that ability EI predicted a modest but additional variance in prospective levels of hedonic and eudaimonic well-being over and above personality traits. Also, the explained variance of EI was higher for eudaimonic than for hedonic well-being. These findings provide some preliminary evidence on the prospective value of ability EI in the maintenance of positive mood and better outlook on life (hedonia) and, specifically, in the development of aspects of human functioning (eudaimonia).

1. Introduction

In the last decades, a large body of empirical research has been interested in examining personal and demographic factors that affect well-being (Keyes, Shmotkin, & Ryff, 2002). In fact, the research literature has traditionally documented that certain socio-demographic dimensions such as gender (Nolen-Hoeksema & Rusting, 2003), challenges in life (Ryff, Keyes, & Hughes, 2003) or economic standing (Diener & Seligman, 2004) are significantly associated with well-being, but results have differed depending on the conceptualization used (Keyes et al., 2002). In this context, Ryan and Decís (2001) review differentiated two streams of approaches to well-being, namely hedonism and eudaimonism, which are founded on different views of human nature.

Hedonic well-being involves experiencing more pleasant than unpleasant emotions and greater satisfaction with life, being traditionally associated with the concept of subjective well-being (SWB) (Diener, 1984). Well-being consists of subjective happiness and concerns the experience of pleasure versus displeasure broadly construed to include all judgments about the good/bad elements of life (Ryan & Deci, 2001). In operational terms, SWB is usually interpreted to mean experiencing a low level of negative affect and high levels of positive affect and satisfaction with life. To the extent that

a person strongly endorses these three dimensions, s/he is said to be high in SWB (Deci & Ryan, 2008).

Eudaimonic well-being involves a sense of fulfilment and meaning in life (Ryan & Deci, 2001; Ryff, 1989). In the eudaimonic approach, a person is considered to be psychologically well when developing his/her true potential or there is congruence between the proposed goals and his/her true self (or daimon). Therefore, well-being understood from this perspective is often labelled as psychological well-being (PWB).

Research has mainly focused on identifying the potential predictors associated with higher hedonic and eudaimonic well-being. In spite of the significant overlap between the constructs, since conditions that promote SWB may not necessarily yield PWB (Keyes et al., 2002), researchers in the field of well-being have recently examined other potential predictors of well-being to enhance our understanding of human potential. For example, a wealth of evidence has already examined the role of personality traits (Keyes et al., 2002) or the importance of gratitude (Kashdan, Uswatte, & Julian, 2006) in accounting for differential profiles of hedonic and eudaimonic well-being. Our interest in this study is examination of the role of a new dimension which has emerged since the late 1980s and is linked to well-being and personal growth, that is, emotional intelligence (EI).

Despite being a concept of only twenty years standing, EI has shown its important predictive role in different real-life outcomes (Mayer, Roberts, & Barsade, 2008). In this field there are two different but complementary research approaches: trait EI and ability EI.

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The first stream of research defines EI as a combination of emotional self-perceptions and personality traits such as emotion perception, self-esteem, optimism or self-motivation (Petrides & Furnham, 2000). On the other hand, ability EI is more focused on abilities to process information of an emotional nature: conceived as abilities to perceive emotion, integrate emotion to facilitate thought, understand emotions and regulate emotions to promote personal growth (Mayer & Salovey, 1997). Owing to the differential nature of the models, they use different methods of assessment. Whereas the trait EI approach typically uses self-report measures, researchers in the ability EI tradition use performance measures such as the MSCEIT (Mayer et al., 2008).

Emotional well-being might be postulated as the ultimate form of human contentment and if EI is a reflection of human strength and the ability to process emotion-laden information competently it would be expected that EI shares a positive association with emotional well-being. Given that EI is considered relatively stable human mental ability it is tentative that, albeit related, the magnitude between EI and the two kind of well-being might be distinct, being more related with a wider sense of development in order to "enhance emotional and intellectual growth" (eudaimonic well-being) (Mayer & Salovey, 1997; p. 10) than with balance of positive and negative affect (hedonic well-being).

The few studies using measures of ability EI have been performed with isolated well-being indicators, particularly life satisfaction, finding in most cases modest or even non-significant relationships (Bastian, Burns, & Nettelbeck, 2005; Mayer, Caruso, & Salovey, 1999). Based on the above literature, it seems that IE shows slight correlations, sometimes non-significant, with hedonic well-being indicators. On the other hand, some research has documented that ability EI scores are moderately correlated with scales of psychological well-being (Brackett & Mayer, 2003; Brackett, Rivers, Shiffman, Lerner, & Salovey, 2006). Specifically, MSCEIT total scores correlated with five of the six dimensions of eudaimonic well-being evaluated by Ryff scales (all but Autonomy). Most of the correlations remained significant when the influence of the Big Five personality traits and IQ were controlled for. These findings suggest that the relationship between ability EI and eudaimonic well-being is slightly higher than the associations between ability EI and hedonic well-being indicators.

In sum, the above literature review provides some evidence that EI is associated with both eudaimonic and, to a lesser degree, hedonic well-being, but the significant differences in magnitude remain untested. Nevertheless, most research has not explicitly assessed EI and its influence on well-being outcomes in prospective studies, most of them using cross-sectional designs (i.e. Bastian et al., 2005; Brackett & Mayer, 2003). Other studies have used prospective designs but with adolescent samples (Zeidner & Olnick-Shemesh, 2010), a limitation which prejudices generalization to adult samples. Finally, prior studies have also failed simultaneously to assess both approaches of well-being, i.e. hedonic and eudaimonic indicators, to examine the different contributions of emotional intelligence abilities.

Also, since certain personality traits have been significantly associated with well-being, suggesting a correspondence between personality styles and individual differences in hedonic (DeNeve & Cooper, 1998) and eudaimonic well-being (Schmutte & Ryff, 1997), assessment of the incremental validity of EI after controlling for personality traits is necessary to determine its unique and independent contribution to hedonic and eudaimonic well-being.

Taking into account the above considerations, this study analyses concurrently and prospectively the relationship between ability EI, hedonic and eudaimonic well-being. We expected that ability EI evaluated by MSCEIT would be significantly related to eudaimonic well-being to a higher degree, whereas the correlation between ability EI and hedonic well-being would be smaller. It was hypothesized that ability EI would be related to levels of concurrent and prospective eudaimonic well-being even when the influence of big-five traits was controlled for. Increasing evidence, however, suggests total EI will show weaker or even non-significant explained variance in hedonic well-being once the effect of personality traits are taken into account.

2. Method

2.1. Participants and procedure

Participants, who initially took part voluntarily and anonymously in the study, consisted of 380 (95 males, 285 females) university students from University of Málaga of whom 349 returned to complete follow-up questionnaires 12 weeks later. Participants from the initial sample who failed to return for the Time 2 follow-up session did not significantly differ in any variable measured in this study from those who completed the questionnaires at both time points. Hence, the responses provided by the remaining 349 participants (85 males, 264 females) at both times were used. The participants came from a variety of health disciplines, including nursing, physiotherapy, chiropody and occupational therapy. Ages ranged from 18 to 50 (M = 21.55, S.D. = 4.88).

Participants signed an informed consent form and completed the Time 1 instrument package containing all the instruments described below. After 12 weeks, participants completed again in class the Satisfaction with Life Scale, The Positive and Negative Scale and the Psychological Well-being Scale.

2.2. Materials

Emotional Intelligence. The MSCEIT (Version 2.0; Mayer, Salovey, & Caruso, 2002) is a 141-item ability scale designed to measure the four branches of Mayer and Salovey's (1997) theory of EI: (a) perceiving emotions, (b) using emotions to facilitate thought, (c) understanding emotions, and (d) managing emotions. Since previous research has found high correlations between the overall and branch scores (Mayer et al., 2002), in the present study we used overall EI scores as a global construct. EI was measured with a Spanish translation of the MSCEIT which showed similar psychometric properties to the original instrument (Extremera, Fernández-Berrocal, & Salovey, 2006). For this study, split-half reliability for total MSCEIT score was 0.88.

Hedonic Well-Being. To assess subjective well-being we administered the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The PANAS is a brief measure of positive and negative affect which consists of two ten-item mood scales. In addition, participants were administered the Spanish version (Atienza, Balaguer, & Garcia-Merita, 2003) of the Satisfaction with Life Scale (SWLS, Diener, Emmons, Larsen, & Griffin, 1985). The positive affect, the inverse of negative affect and life satisfaction scores were summed to provide a composite of hedonic well-being, as in previous studies (e.g. Sheldon & Elliot, 1999).

Eudaimonic well-being. To assess eudaimonic well-being we administered the highly reliable Scale of Psychological Well-being (PWB; Ryff, 1989). The PWB contains six scales that measure theoretically derived parameters of optimal psychological functioning: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life and self-acceptance. In this study we used the well-validated shorter version of the Spanish scale of psychological well-being, which has demonstrated good psychometric properties (Van Dierendonck, Díaz, Rodríguez-Carvajal, Blanco, & Moreno-Jiménez, 2008). Instead of using the scores of the six dimensions of this scale, we summed all subscales to provide a composite score of eudaimonic well-being.

Big Five Inventory-44 (BFI-44; Benet-Martinez & John, 1998). The BFI-44 is a 44-item, self-report inventory designed to assess the Big Five factors of personality: Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience. The BFI-44 scales have shown substantial internal consistency, retest reliability and clear factor structure. We used the Spanish version of BFI-44, which has similar psychometric properties to the English version (Benet-Martinez & John, 1998).

3. Results

3.1. Descriptive analyses

Means, standard deviations, Cronbach's alpha coefficients and Pearson correlations for the study variables are shown in Table 1. Regarding the hedonic well-being indexes and EI, as predicted, ability EI scores were positively related to hedonic well-being both concurrently and prospectively. Similarly, with respect to EI and eudaimonic well-being, as expected, higher EI were moderately associated with eudaimonic well-being indexes both concurrently and prospectively. Moreover, a comparison of the correlation coefficients and their 95% confidence intervals (CI), obtained for ability EI and hedonic and eudaimonic well-being at time 1 with Fisher's z-test, indicated that the tendency for the relationship between ability EI scores and well-being indicators to be stronger for eudaimonic well-being ($r = 0.26$; CI = 0.16, 0.36) than for hedonic well-being ($r = 0.16$; CI = 0.06, 0.27) was only marginally significant ($z = 1.76$, $p = 0.08$). With respect to relations between ability EI and well-being indicators at time 2, although for EI ability and eudaimonic well-being the correlation coefficient was stronger ($r = 0.23$; CI = 0.13, 0.33), compared with the associations between ability EI and hedonic well-being ($r = 0.19$; CI = 0.09, 0.29), the difference was not statistically significant according to Fisher's z-test ($z = 0.55$; n.s.).

3.2. Hierarchical regression analyses

Next, we examined the independent effect of ability EI on concurrent and prospective levels of hedonic and eudaimonic well-being. To test this, we used a hierarchical regression strategy in which hedonic and eudaimonic well-being were first regressed onto Big Five facets, after which ability EI was entered in the second step. The results of the regression analysis relative to the prediction of hedonic and eudaimonic well-being are reported in Table 2 at time 1 and in Table 3 at time 2.

For concurrent and prospective hedonic well-being, in the first step, the five domains were entered and two significant models emerged, accounting for 32% ($R^2 = 0.32$; F(5, 343) = 32.22; $p < .01$), and 26% ($R^2 = 0.26$; F(5, 343) = 24.14; $p < .01$) of variance in concurrent and prospective hedonic well-being, respectively. Later, scores from ability EI were entered in Step 2, obtaining

two significant models and accounting for an additional 1% ($R^2 = 0.33$; F(6, 342) = 27.90; $p < .05$) and 2% ($R^2 = 0.28$; F(6, 342) = 21.97; $p < .01$) of the variance in concurrent and prospective hedonic well-being, respectively.

In relation to concurrent and prospective eudaimonic well-being, in the first step, the personality facets were entered, and two significant models emerged, accounting for 28% ($R^2 = 0.28$; F(5, 343) = 26.82; $p < .01$) and 22% ($R^2 = 0.22$; F(5, 343) = 19.21; $p < .01$) of variance in concurrent and prospective eudaimonic well-being, respectively. In the second step we entered the EI scores, which also led to two significant models, adding an additional 4% ($R^2 = 0.32$; F(6, 342) = 26.38; $p < .01$) and 3% ($R^2 = 0.25$; F(6, 342) = 18.85; $p < .01$) of the variance in concurrent and prospective eudaimonic well-being, respectively.

3.3. Structural equation modelling

Next, we used structural equation modeling (SEM) to test the hypothesis that EI and personality would predict significantly both hedonic and eudaimonic well-being. One advantage of SEM is that it corrects for measurement error in the constructs of interest. The SEM was tested with AMOS 18. Maximum likelihood estimation was used to evaluate the fit of the measurement and the structural models for time 1 and time 2 to the empirical data. First, given that previous findings have showed the EI measured by MSCEIT is relatively independently of personality factors, no associations between both construct were included in the model, considering them as independent factors. Similarly, due to the above findings of significant associations between hedonic and eudaimonic well-being, the correlation between the disturbance terms of those measures were incorporated into the model. In accordance with Byrne (2001), the initial test of the structural model indicated a questionable fit to the data at both times: $\chi2/df = 2.49$; $p < .05$; CFI = 0.98; RMSEA = .06. Examination of modification indexes provided by AMOS suggested that fit could be improved by eliminating the non-significant associations between Openness and Agreeableness with hedonic and eudaimonic well-being at both times. Incorporating these changes, the fit of the structural model was adequate at time 1 with $\chi2/df = 2.01$; $p < .05$; CFI = 0.97; RMSEA = .05 and at time 2 with $\chi2/df = 1.85$; $p = .05$; CFI = 0.98; RMSEA = .05. The models for time 1 and time 2 with standardized beta coefficients are shown in Fig. 1, with the coefficients for time 2 in brackets. All paths were significant ($p < .05$).

4. Discussion

The main objective of our study was to examine the relationship between EI ability and both concurrent and prospective hedonic and eudaimonic well-being. Our findings extend past work on evidence that ability EI is associated with both types of well-being (Brackett et al., 2006) and the results are supportive of ability EI as

Table 1
Means, standard deviations, reliabilities and intercorrelations among measures.

	M	S.D.	Alpha	1	2	3	4	5	6	7	8	9
1. Overall EI	100.04	14.33	.88	–								
2.Extraversion	3.37	.69	.84	.09	–							
3. Agreeableness	3.75	.50	.61	.17**	.22**	–						
4. Conscientiousness	3.57	.60	.75	.09	.14**	.31**	–					
5. Neuroticism	3.01	.74	.79	−.07	−.17**	−.21**	−.05	–				
6. Openness	3.59	.54	.72	.05	.27**	.17**	.20**	−.16**	–			
7. Hedonic well-being T1	2.16	.56	.81	.16**	.37**	.20**	.21**	−.45**	.19**	–		
8. Eudaimonic well-being T1	4.49	.55	.88	.26**	.40**	.24**	.22**	−.35**	.24**	.62**	–	
9. Hedonic well-being T2	2.33	.48	.78	.19**	.34**	.19**	.21**	−.38**	.22**	.91**	.55**	–
10. Eudaimonic well-being T2	4.55	.52	.87	.23**	.37**	.19**	.19**	−.28**	.25**	.54**	.82**	.60**

Note: N = 349.
** $p < 0.01$.

Table 2
Hierarchical regression analyses showing amount of variance in hedonic and eudaimonic well-being at Time 1.

Hedonic Well-being T1					Eudaimonic Well-being T1				
	B	SE B	β	R^2	ΔR^2	B	SE B	β	R^2	ΔR^2
Step 1				.32	.32**				.28	.28**
Extraversion	.21	.03	.27**			.23	.03	.29**		
Agreeableness	.00	.05	.00			.07	.05	.06		
Conscientiousness	.13	.04	.14**			.11	.04	.12**		
Neuroticism	−.30	.03	−.39**			−.20	.03	−.27**		
Openness	.02	.04	.02			.08	.05	.08		
Step 2				.33	.01*				.32	.04**
Extraversion	.21	.03	.26**			.22	.03	.28**		
Agreeableness	−.01	.05	.01			.04	.05	.04		
Conscientiousness	.13	.04	.14**			.11	.04	.12*		
Neuroticism	−.29	.03	−.39**			−.20	.03	−.26**		
Openness	.02	.04	.02			.08	.04	.08		
Total EI	1.24	.58	.09*			2.44	.58	.19**		

* $p < 0.05$.
** $p < 0.01$.

Table 3
Hierarchical regression analyses showing amount of variance in hedonic and eudaimonic well-being at Time 2.

Hedonic Well-being T2					Eudaimonic Well-being T2				
	B	SE B	β	R^2	ΔR^2	B	SE B	β	R^2	ΔR^2
Step 1				.26	.26**				.22	.22**
Extraversion	.17	.03	.24**			.21	.03	.28**		
Agreeableness	.00	.04	.00			.02	.05	.02		
Conscientiousness	.11	.04	.14**			.09	.04	.10*		
Neuroticism	−.20	.03	−.32**			−.14	.03	−.20**		
Openness	.06	.04	.07			.10	.04	.11*		
Step 2				.28	.02**				.25	.03**
Extraversion	.16	.03	.23**			.20	.03	.27**		
Agreeableness	−.01	.04	−.01			.00	.05	.00		
Conscientiousness	.11	.03	.13**			.08	.04	.10*		
Neuroticism	−.20	.03	−.31**			−.14	.03	−.20**		
Openness	.06	.04	.07			.10	.04	.11*		
Total EI	1.50	.51	.13*			2.10	.57	.17**		

* $p < 0.05$.
** $p < 0.01$.
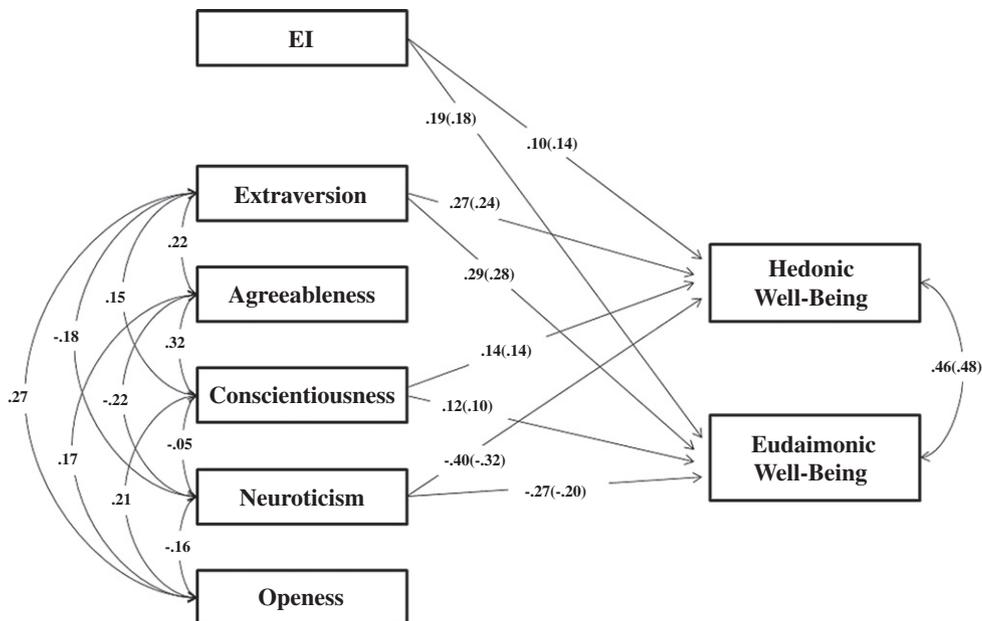
Fig. 1. Structural equation model with standardized maximum likelihood parameter estimates for Time 1 and Time 2 (coefficients of the Time 2 in brackets).

an important and differential predictor of hedonic and eudaimonic well-being (Mayer et al., 2008). The current findings replicate previous results using EI self-reported measures (Furnham & Petrides, 2003) and cross-sectional designs using ability EI (Brackett & Mayer, 2003) and extend them by showing that those participants who reported higher levels of EI also reported greater levels of hedonic and eudaimonic well-being three months later.

In general, our results suggest that EI might be an independent and unique predictor of hedonic and eudaimonic well-being over time and over and above dispositional traits. It was expected that EI as measured by MSCEIT would not be substantively related to personality test, although some small correlation might be found (Mayer et al., 2002). Our results confirmed this minimal correlation between EI and personality, especially with neuroticism and extraversion, underlining that the MSCEIT, unlikely to self-report EI measures, is measuring something different than personality assessments and that it predicts well-being above and beyond existing personality factors.

Although ability EI theory considers EI integral to psychological growth and positive well-being (Mayer & Salovey, 1997), very little empirical research has specifically investigated this possibility. The current findings provide some preliminary evidence. With respect to eudaimonic well-being, EI ability was a significant predictor of both concurrent and prospective levels of eudaimonic well-being, expanding previous cross-sectional research (Brackett & Mayer, 2003).

Similar results, albeit more modest, were obtained for hedonic well-being. Ability EI was a significant predictor of concurrent and prospective levels of hedonic well-being. It has been widely documented that EI evaluated by self-report measures is associated with happiness (Furnham & Petrides, 2003). Our finding extends these previous results using ability EI measures. Individuals with higher EI measured by MSCEIT were better able to maintain positive mood and a better outlook on life in a 12-week follow-up study. Although the correlation coefficients between ability EI and eudaimonic well-being were stronger in magnitude compared with the association between ability EI and hedonic well-being at two points in time, the differences were not, however, statistically significant in the Fisher's z-test. The small difference and wide confidence interval of each correlation suggest that a larger sample is needed for the association to be statistically significant. Nevertheless, some preliminary evidence on the differential role of EI in both aspects of well-being can be inferred from our regression and structural equation analyses. In line with previous research indicating weaker relations between IE and hedonic well-being (Brackett et al., 2006), we found that ability EI explained from 1 to 2% of variance in hedonic well-being controlling for Big Five dimensions, whereas the explained variance of EI on eudaimonic well-being was higher, between 3 and 4%. Although the predictive effects of ability EI on eudaimonic well-being were not large, incremental values such as these are not uncommon and have some merits in prospective and stringent designs (Hunsley & Meyer, 2003). As some researchers have pointed out, in the study of new theoretical constructs, such as EI, even findings that account for small amounts of variance independent of other well-known personality variables should be viewed as a reasonable contribution to the understanding of the mechanism involved in human functioning (Mayer, Salovey, & Caruso, 2000).

Nevertheless, the psychological mechanisms through which EI could promote the eudaimonic and hedonic well-being may be various and further studies with mediational designs would help to clarify them. For example, Shulman and Hemenover (2006) suggest that successful emotional abilities may produce feelings of accomplishment, heightened mastery and positive self-regard which may enhance psychological well-being. Another tentative mechanism is that emotionally intelligent people may experience lower emotional distress when they face stressful situations (Gohm, Corser, & Dalsky, 2005), which could result in a reciprocal increase in positive affect. Similarly, EI people may be more likely to use positive coping strategies such as expression of feelings and eliciting social support, instead of maladaptive strategies such as rumination or avoidance, and thereby reduce negative affect and increase well-being (Matthews et al., 2006). Finally, Shulman and Hemenover (2006) have underlined that higher EI people will also feel they have more control over their environment because they can control their negative emotions, leading to more feeling of mastery of their life and greater psychological well-being.

Independently of involved mechanisms, several important limitations of the present study must be mentioned. First, like most of the studies published on EI the participants were undergraduate students, who may not necessarily generalize to clinical or normative populations. Second, the conclusions of the present study may be limited by the higher proportion of female undergraduates in the sample, in order to generalize our findings further studies with homogenous percentage of females and males would be necessary. Taken into account the differential base rates of emotional and affective deficits for men and women, it is possible that personal factors that predispose individuals to appearance and maintenance of well-being may differ across the sexes. Therefore, these findings need to be replicated with similar percentages of women and men from community-based samples and clinical populations. Third, insofar as other personal dimensions like cognitive abilities have also been used as control variables in studies of incremental validity of EI future studies will need to control for both personality and cognitive abilities in the same analysis to examine prospectively the incremental validity of EI in order to confirm our findings.

Beyond the limitations discussed above, our findings support the ability EI assertion that emotional abilities promote emotional growth and contribute to human well-being (Mayer & Salovey, 1997). Also, our analyses provide some preliminary support for the differential role of EI in hedonic and eudaimonic well-being, a distinction that has useful theoretical and clinical implications. The relatively higher contribution of the EI ability to eudaimonic well-being indexed concurrently and prospectively suggests that it may be a significant personal resource for the maintenance of self-development, personal growth and purposeful engagement. On the basis of these findings and in the light of considerations of data availability (Salovey, Mayer, & Caruso, 2002), it appears that a better understanding of what it is that makes us enjoy and contribute to a happier life overall could be enriched by including EI in further theoretical models of positive psychology.

References

Atienza, F., Balaguer, I., & Garcia-Merita, M. (2003). Satisfaction with life scale: Analysis of factorial invariance across sexes. *Personality and Individual Differences, 35*, 1255–1260.

Bastian, V. A., Burns, N. R., & Nettelbeck, T. (2005). Emotional intelligence predicts life skills, but not as well as personality and cognitive abilities. *Personality and Individual Differences, 39*(6), 1135–1145.

Benet-Martinez, V., & John, O. P. (1998). Los Cinco Grandes across cultures and ethnic groups: Multitrait, multimethod analyses of the Big Five in Spanish and English. *Journal of Personality and Social Psychology, 75*, 729–750.

Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin, 29*, 1147–1158.

Brackett, M. A., Rivers, S. E., Shiffman, S., Lerner, N., & Salovey, P. (2006). Relating emotional abilities to social functioning: A comparison of self-report and performance measures of emotional intelligence. *Journal of Personality and Social Psychology, 91*, 780–795.

Byrne, B. M. (2001). *Structural equation modeling with Amos: Basic concepts, applications, and programming.* Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Deci, E. L., & Ryan, R. M. (2008). Hedonia, eudaimonia, and well-being: An introduction. *Journal of Happiness Studies, 9*, 1–11.

DeNeve, K. M., & Cooper, H. (1998). The happy personality: A meta-analysis of 137 personality traits and subjective well-being. *Psychological Bulletin, 124*, 197–229.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin, 95*, 542–575.

Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment, 49*, 71–75.

Diener, E., & Seligman, M. E. P. (2004). Beyond money: Toward an economy of well-being. *Psychological Science in the Public Interest, 5*, 1–31.

Extremera, N., Fernández-Berrocal, P., & Salovey, P. (2006). Spanish version of the Mayer–Salovey–Caruso Emotional Intelligence test (MSCEIT) version 2.0: Reliabilities, age and gender differences. *Psicothema, 18*, 42–48.

Furnham, A., & Petrides, K. V. (2003). Trait emotional intelligence and happiness. *Social Behavior and Personality, 31*, 815–824.

Gohm, C. L., Corser, G. C., & Dalsky, D. J. (2005). Emotional intelligence under stress: Useful, unnecessary, or irrelevant? *Personality and Individual Differences, 39*, 1017–1028.

Hunsley, J., & Meyer, G. J. (2003). The incremental validity of psychological testing and assessment: Conceptual, methodological, and statistical issues. *Psychological Assessment, 15*, 446–455.

Kashdan, T., Uswatte, G., & Julian, T. (2006). Gratitude and hedonic and eudaimonic well-being in Vietnam war veterans. *Behaviour Research and Therapy, 44*, 177–199.

Keyes, C. L. M., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology, 82*(6), 1007–1022.

Matthews, G., Emo, A. K., Funke, G., Zeidner, M., Roberts, R. D., & Costa, P. T. (2006). Emotional intelligence, personality, and task-induced stress. *Journal of Experimental Psychology, 12*, 96–107.

Mayer, J. D., Caruso, D. R., & Salovey, P. (1999). Emotional intelligence meets traditional standards for an intelligence. *Intelligence, 27*, 267–298.

Mayer, J., Roberts, R., & Barsade, S. G. (2008). Human abilities: Emotional intelligence. *Annual Review of Psychology, 59*, 507–536.

Mayer, J. D., & Salovey, P. (1997). What is emotional intelligence? In P. Salovey & D. Sluyter (Eds.), *Emotional development and emotional intelligence. Implications for educators* (pp. 3–31). New York: Basic Books.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2000). Models of emotional intelligence. In R. J. Sternberg (Ed.), *Handbook of intelligence* (pp. 396–420). Cambridge, UK: Cambridge University Press.

Mayer, J. D., Salovey, P., & Caruso, D. R. (2002). *Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT) user's manual*. Toronto: MHS.

Nolen-Hoeksema, S., & Rusting, C. L. (2003). Gender differences in well-being. In D. Kahneman, E. Diener, & N. Schwarz (Eds.), *Well-being: The foundations of hedonic psychology* (pp. 330–350). New York: Russell Sage Foundation.

Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences, 29*, 313–320.

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: a review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*, 141–166.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*, 1069–1081.

Ryff, C. D., Keyes, C. L. M., & Hughes, D. L. (2003). Status inequalities, perceived discrimination, and eudaimonic well-being: Do the challenges of minority life hone purpose and growth? *Journal of Health Social Behaviour, 44*, 275–291.

Salovey, P., Mayer, J. D., & Caruso, D. (2002). The positive psychology of emotional intelligence. In C. R. Synder & S. López (Eds.), *Handbook of positive psychology* (pp. 159–171). New York: Oxford Publisher.

Schmutte, P., & Ryff, C. (1997). Personality and well being: Reexamining methods and meanings. *Journal of Personality and Social Psychology, 73*, 549–559.

Sheldon, K. M., & Elliot, A. J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology, 76*, 546–557.

Shulman, T., & Hemenover, S. (2006). Is dispositional emotional intelligence synonymous with personality? *Self and Identity, 5*, 147–171.

Van Dierendonck, D., Díaz, D., Rodríguez-Carvajal, R., Blanco, A., & Moreno-Jiménez, B. (2008). Ryff's six-factor model of psychological well-being: A Spanish exploration. *Social Indicators Research, 87*, 473–479.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063–1070.

Zeidner, M., & Olnick-Shemesh, D. (2010). Emotional intelligence and subjective well-being revisited. *Personality and Individual Differences, 48*, 431–435.