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TRAIT EMOTIONAL INTELLIGENCE AND HAPPINESS

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Participants completed measures of trait emotional intelligence (trait EI), happiness, personality, and cognitive ability. Neuroticism was negatively related to happiness, whereas Extraversion and Openness to Experience were positively related to it. Cognitive ability was not related either to happiness or to trait EI. A 3-step hierarchical regression showed that trait EI explained over 50% of the total variance in happiness. The positive relationship between trait EI and happiness persisted in the presence of the Big Five. In contrast, the Big Five did not account for a significant amount of happiness variance when trait EI was partialled out.

Keywords: happiness, emotional self-efficacy, personality, IQ, trait EI, trait emotional intelligence, happiness, cognitive ability, extraversion, openness to experience, three-step hierarchical regression, big five

Psychologists have mainly focused on human unhappiness (depression, anxiety, emotional disorders, etc.) and neglected the positive aspects of human potential (Seligman, 2003). It was only comparatively recently, especially after Bradburn's (1969) discovery of the independence of positive and negative affect, that psychological research started to examine the definitions, correlates, and predictors of happiness (e.g., Argyle, 1992, 2001; Diener, 1984, 2000; Eysenck, 1990; Myers, 1992; Seligman & Csikszentmihalyi, 2000). Argyle (2001) presented a tripartite conceptualization of happiness comprising: 1) the average level of satisfaction over a specific time period, 2) the frequency and degree of positive affect; and 3) the relative absence of negative affect.

Personality traits, particularly Extraversion and Neuroticism, have consistent-

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ly been found to be the strongest predictors of general happiness levels, accounting for up to half of the total reliable variance in the various measures (Argyle & Lu, 1990; Brebner, 1998; Eysenck, 1990; Francis, Brown, Lester, & Philipchalk, 1998; Furnham & Brewin, 1990; Furnham & Cheng, 1997, 1999, 2000; Heady & Wearing, 1991; Lewis, Francis, & Ziebertz, 2002; Myers & Diener, 1995). Indeed, Francis entitled his 1999 publication in *Personality and Individual Differences* "Happiness Is a Thing Called Stable Extraversion". While the links between happiness and personality have been the subject of much research, comparatively few studies have examined the association between happiness and cognitive ability. One objective of this study was to investigate the relationship between happiness and cognitive ability, as operationalized via four distinct IQ tests. Eysenck (1990, p. 33) argued: "Despite the fact that it definitely seems preferable to be clever rather than dull, there is very little evidence that intelligence is related in any way to happiness". In a similar vein, Argyle (2001) noted that education is related to happiness, but once the confounding influences of occupational status and income are taken into account, the relationship virtually disappears.

Another omission in the literature on individual-differences correlates and predictors of happiness concerns the concept of emotional intelligence (EI). Two types of EI can be distinguished based on the measurement method used to operationalize the construct (Austin, Saklofske, Huang, & McKenney, in press; Petrides & Furnham, 2000a, b; Saklofske, Austin, & Minski, 2003).

Trait EI (or 'emotional self-efficacy') is operationalized through self-report questionnaires, whereas *ability EI* (or "cognitive-emotional ability") is operationalized through maximum performance tests, that is, tests comprising items that may be answered correctly or incorrectly. The operationalization of ability EI is considerably complicated by the fact that emotional experiences are inherently subjective (see, e.g., Spain, Eaton, & Funder, 2000) and, therefore, not amenable to objective scoring criteria.

Trait EI is *a constellation of emotion-related self-perceived abilities and dispositions located at the lower levels of personality hierarchies* (Petrides & Furnham, 2001). Individuals with high trait EI scores believe that they are "in touch" with their emotions and that they can regulate them in a way that promotes well-being. These individuals should enjoy higher levels of happiness.

The present study set out to replicate previous findings on the relationship between personality and happiness as well as to investigate the association of happiness with cognitive ability and trait EI. It was hypothesized that Extraversion and Neuroticism would be, respectively, positively and negatively correlated with happiness (H1 and H2). It was further hypothesized that trait EI would be a positive predictor of happiness (H3) and that this relationship would remain statistically significant even after controlling for the effects of the Big

Five (H4). Finally, it was hypothesized that cognitive ability would not be significantly associated with either trait EI (H5) or happiness (H6).

METHOD

PARTICIPANTS

In total, 88 individuals participated in the study; 11 were male and 77 female. The mean age for the sample was 19.79 yrs (*SD* = .83 yrs; Range = 18 - 23 yrs).

MEASURES

1. Personality

NEO-FFI (Costa & McCrae, 1992). This is a 60-item questionnaire measuring the "Big Five" personality factors, viz., Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness. Items are responded to on a 5-point Likert scale, ranging from *strongly disagree* to *strongly agree*.

2. Cognitive ability

a) *Wonderlic Personnel Test* (Wonderlic Personnel Test Inc., 1998). This 50-item test is administered in 12 minutes and provides a measurement of general intelligence. Scores range from 0 to 50. Items include word and number comparisons, disarranged sentences, serial analysis of geometric figures, and story problems requiring mathematical and logical solutions. The test has impressive norms and correlates very highly (r = .92) with the WAIS-R.

b) *The Baddeley Reasoning Test* (Baddeley, 1968). This 60-item test is administered in 3 minutes and measures fluid intelligence through logical reasoning. Scores range from 0 to 60. Each item is presented in the form of a grammatical transformation that is either "true" or "false", e.g., "A precedes B - AB" (true) or "A does not follow B - BA" (false). The test has been used in many studies to obtain a quick and reliable measurement of cognitive ability (e.g., Furnham, Gunter, & Peterson, 1994).

c) *AH5 - Part 1* (Heim, Watts, & Simmonds, 1970). This is a well-established 20-minute measure of verbal and spatial ability. It was designed for use on selected and highly intelligent samples (notably university students).

d) *WAIS Vocabulary Subscale* (Wechsler, 1981). This 30-item WAIS subscale was used to assess verbal intelligence. Verbal IQ is a very good index of crystallized, as opposed to fluid, intelligence (Cattell, 1971; Horn, 1989). The vocabulary subscale is the subtest with the highest loading on the verbal IQ factor of the WAIS.

3. *Trait Emotional Intelligence Questionnaire Short Form* (TEIQue-SF; Petrides, Pérez, & Furnham, 2003)

This is a 30-item questionnaire designed to measure global trait emotional

intelligence (trait EI). It is based on the full form of the TEIQue (Petrides & Furnham, 2003), which covers the trait EI sampling domain comprehensively. The TEIQue-SF provides highly reliable global trait EI scores that correlate meaningfully with a wide range of diverse criteria, including coping styles, life satisfaction, personality disorders, perceived job control, and job satisfaction (Petrides et al., 2003). Items are responded to on a 7-point Likert scale.

4. The Oxford Happiness Inventory (Argyle, Martin, & Crossland, 1989).

This is a 29-item questionnaire that has been used extensively in happiness research (Argyle, 2001; Cheng & Furnham, 2003; Furnham, Cheng, & Shirasu, 2001). Items are responded to on a 7-point rating scale.

Procedure

All participants were first-year undergraduate students, who completed a battery of questionnaires and tests shortly after arriving at university. Testing took approximately 3 hours. All participants were fully debriefed about their scores.

RESULTS

Correlations

Table 1 summarizes the zero-order correlations between happiness and the other measures in the study. With the exception of a significant correlation with the WAIS vocabulary score, happiness was not related to any cognitive-ability tests. As would be expected (Spearman, 1904), scores on the cognitive-ability tests were significantly intercorrelated (Pearson product-moment correlations varied between .37 and .69). Thus, the four tests were combined into a single reliable composite ('g'; alpha = .73). g was not related to happiness (r = .14, p = *ns*). Trait EI was the strongest correlate of happiness, though Neuroticism, Extraversion, and Openness also showed statistically significant associations (see Table 1). As expected, trait EI was not significantly correlated to any of the cognitive-ability tests.

Regressions

A three-step hierarchical regression was performed, whereby happiness was regressed on trait EI (step 1), g (step 2), and the Big Five (Step 3). These results are summarized in Table 2 and show that trait EI is by far the strongest predictor of happiness, accounting for over 50% of the total variance. In fact, in the presence of trait EI, none of the Big Five factors was reliably associated with happiness, even though Neuroticism, Extraversion, and Openness all showed significant zero-order correlations (see Table 1). The R^2 change in the last step of the hierarchical regression (where the Big Five were collectively entered into the equation) was not statistically significant (F-change$_{(5, 57)}$ = 1.30, p = *ns*).

TABLE 1
CORRELATES OF THE OXFORD HAPPINESS INVENTORY

		Mean	*SD*	*r* with happiness
IQ	Wonderlic	25.91	5.89	-.07
	Baddeley	29.85	13.11	.01
	Alice Han	14.10	4.89	.13
	WAIS vocabulary	54.15	11.19	.26*
Trait EI	TEIQue-SF	143.93	21.69	.70**
Big Five N		18.58	6.79	-.37**
	E	23.13	5.77	.33**
	O	19.35	5.32	.38**
	A	18.51	4.25	.15
	C	24.05	5.58	.10

*p<.05, **p<.01

TABLE 2
RESULTS OF THREE-STEP HIERARCHICAL REGRESSIONS WITH THE OXFORD HAPPINESS INVENTORY AS THE DEPENDENT VARIABLE

Regression	Beta	*t*
Step 1. F (1, 63) = 72.14; Adj. R^2 = .53		
Trait EI	.73	8.5*
Step 2. F (2, 62) = 36.38; Adj. R^2 = .53		
Trait EI	.74	8.5*
g	.08	.91
Step 3. F (7, 57) = 11.60; Adj. R^2 = .54		
Trait EI	.59	5.19*
g	.04	.44
N	-.08	-.78
E	.11	1.10
O	.15	1.47
A	.09	0.94
C	-.01	-0.07

*p < .001

DISCUSSION

All hypotheses (H1-H6) were borne out by the data. Thus, Extraversion and Neuroticism were statistically significantly associated with happiness, as was trait EI. In addition, happiness was positively related to Openness. In line with

H4, the positive association between trait EI and happiness remained statistically significant even after controlling for scores on the Big Five. Scores on general cognitive ability were associated neither with happiness nor with trait EI. With respect to the last finding, a larger and more representative sample might have resulted in stronger correlations between cognitive ability and the other variables in the study, although, as far as trait EI is concerned, the obtained results are fully in line with theoretical expectations.

The last step in the hierarchical regression is important because it shows that the strong relationship between happiness and personality (particularly Extraversion and Neuroticism) clearly diminishes once trait EI is taken into account. Of course, trait EI is conceptually and empirically related to happiness and well-being (Palmer, Donaldson, & Stough, 2002; Petrides & Furnham, 2001; Saklofske et al., 2003). What is especially interesting, however, is that this relationship not only retains its statistical significance in the presence of the Big Five, but also nullifies the association between happiness and personality.

The issue of whether trait EI has incremental validity over the basic personality dimensions has been discussed at length and conclusively answered elsewhere (e.g., Petrides & Furnham, 2003). One of the issues raised there is that hierarchical regression analyses aimed at assessing the incremental validity of trait EI vis-à-vis the major dimensions of personality are inherently biased because they pitch the single degree of freedom for trait EI against the three or five degrees of freedom for the personality structures. In spite of this, it has been repeatedly shown that trait EI predicts criteria over and above the Giant Three or the Big Five (e.g., Petrides, Frederickson, & Furnham, in press; Saklofske et al., 2003). The extraordinary finding in the present study is the collective failure of the Big Five to account for a significant portion of happiness variance over and above trait EI.

The present findings confirm that well-being is a salient component of trait EI. It is important to recognize, however, that it is neither the sole nor the most important component of the construct. Thus, Petrides et al. (in press) demonstrated that trait EI predicts important life outcomes, such as exclusions from school and truancy, incrementally over the Giant Three, even when its general-mood/well-being component has been removed. Such findings provide empirical answers to questions about whether the associations between trait EI and certain external criteria are simply due to the well-being component of the construct (Mayer, Salovey, & Caruso, 2000). In addition, they raise questions about the overrepresentation of this component in certain trait EI measures, such as the Bar-On EQ-i (Bar-On, 1997).

This study showed that a large amount of variance in happiness is determined by people's emotion-related self-perceptions and dispositions like, for example, emotion regulation, relationship skills, and social competence. A point to note is

that the strength of this relationship could vary across different cultures (Schimmack, Radhakrishnan, Oishi, Dzokoto, & Ahadi, 2002). An important task for future research is to examine the relationship between trait EI and real-life criteria that have been variously linked to happiness (e.g., creativity, job productivity, health, etc.). This could be an important first step towards the development and implementation of research-based assessment systems and intervention programs designed to improve performance, relationship quality, and general well-being.

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