British Journal of Developmental Psychology (2007), 25, 263-275 © 2007 The British Psychological Society



263

www.bpsiournals.co.uk

Trait emotional intelligence, psychological well-being and peer-rated social competence in adolescence

Stella Mavroveli¹, K. V. Petrides¹*, Carolien Rieffe² and Femke Bakker²

¹Institute of Education, University of London, UK ²Leiden University, The Netherlands

> The trait emotional intelligence (trait El or trait emotional self-efficacy) framework provides comprehensive coverage of emotion-related self-perceptions and dispositions. In this study, we investigated the relationship between trait El and four distinct socioemotional criteria on a sample of Dutch adolescents (N = 282; 136 girls, 146 boys; mean age = 13.75 years). As hypothesized, trait El was positively associated with adaptive coping styles and negatively associated with depressive thoughts and frequency of somatic complaints. It was also negatively associated with maladaptive coping styles, in boys only. Adolescents with high trait El scores received more nominations from their classmates for being co-operative and girls gave significantly more nominations to classmates with high trait El scores for having leadership qualities. The discussion focusses on the operationalization of trait emotional self-efficacy in adolescents.

The general concept of emotional intelligence (EI) is partly rooted in Thorndike's (1920) idea of 'social intelligence' and Gardner's (1983) theory of multiple intelligences (especially 'intrapersonal' and 'interpersonal' intelligence). In the current context, EI as a construct was discussed in a dissertation by Payne (1986), even though as a term it had appeared in the literature much earlier (Leuner, 1966). Salovey and Mayer (1990) put forward a theoretical model that viewed the construct as a subset of social intelligence and Goleman (1995) provided a broad and highly influential account that has nonetheless attracted concerted criticism for its unsubstantiated claims about the vital importance of EI in people's personal, social and professional lives. The fact that the field still lacks a universally accepted operational definition has contributed significantly to the emergence of inconsistent and sometimes, contradictory findings that have often been discussed in the scientific literature (e.g. Davies, Stankov, & Roberts, 1998; Epstein, 1998; Mathews, Zeidner, & Roberts, 2002).

^{*} Correspondence should be addressed to K. V. Petrides, Institute of Education, University of London, 25 Woburn Square, London WCIH 0AA, UK (e-mail: k.petrides@ioe.ac.uk).

Trait El versus ability El

In order to address misconceptions and help organize the literature, Petrides and Furnham (e.g. Petrides & Furnham, 2000, 2001) proposed a distinction between two emotional intelligence constructs: trait EI (or trait emotional self-efficacy) and ability EI (or cognitive-emotional ability). This differentiation is based on the type of measurement used in the operationalization process. Trait EI concerns behavioural dispositions and self-perceived abilities and is measured through self-report, whereas ability EI concerns actual emotion-related abilities and must be measured through maximum-performance tests. Trait EI should be investigated with reference to personality hierarchies, whilst ability EI should be investigated with reference to cognitive ability hierarchies. It should be emphasized that trait EI and ability EI are two different constructs conceptually, methodologically and empirically. Research evidence has consistently supported this distinction by revealing low correlations between the two (e.g. O'Connor & Little, 2003; Warwick & Nettelbeck, 2004).

Trait EI is defined as a constellation of emotion-related self-perceptions and dispositions at the lower levels of personality hierarchies (Petrides & Furnham, 2001). It is important to understand that this construct is not related to intelligence as traditionally defined (i.e. cognitive ability). The trait EI framework aims to provide comprehensive coverage of personality facets relating to affect. A growing body of evidence supports the predictive validity of trait EI in different areas, including educational (Petrides, Frederickson, & Furnham, 2004), experimental (Austin, 2005) and organizational (Wong & Law, 2002) psychology. The discriminant and incremental validity of the construct have also been demonstrated in many different studies (Mikolajczak, Luminet, & Menil, 2006; Petrides, Pita, & Kokkinaki, 2007; Saklofske, Austin, & Minski, 2003; Van der Zee & Wabeke, 2004). Other correlates include goal orientation and reduced depressive symptomatology (Martinez-Pons, 1997), life satisfaction and loneliness (Palmer, Donaldson, & Stough, 2002; Saklofske *et al.*, 2003), and depression and affect intensity (Dawda & Hart, 2000).

The present study

Hitherto, most trait EI research has been carried out on adult samples, with only a few studies focussing explicitly on children or adolescents. The present study seeks to help restore the balance by exploring the relationships between trait EI, psychological wellbeing and peer relations on a sample of Dutch adolescent pupils. Based on the theoretical nature of the construct (e.g. Petrides & Furnham, 2001, 2003; Petrides, Furnham, & Mavroveli, in press) and extant empirical findings, we hypothesized that trait EI will show a negative relationship with depression, somatic complaints and maladaptive coping styles (H1, H2 and H3, respectively; see also Dawda & Hart, 2000; Martinez-Pons, 1997) and a positive relationship with adaptive coping styles (H4; see also Petrides, Pérez-González, & Furnham, 2007).

There is a well-established association between depression and persistent pain symptomatology (Harma, Kaltiala-Heino, Rimpela, & Rantanen, 2002), which trait emotional self-efficacy may moderate, such that high trait EI individuals with depression may be less likely to experience somatization due to an advantage in emotional self-regulation (H5). Any such effect, however, will be relatively small because of the restricted variation of the conditional distribution of trait EI at high levels of depression. With respect to peer-rated social competence, it was hypothesized (H6) that trait EI will be negatively related to antisocial behaviours (disruption and aggression) and positively

related to prosocial behaviours (co-operation and leadership; Megerian & Sosik, 1996; Petrides *et al.*, 2004; Zacharatos, Barling, & Kelloway, 2000).

Method

Participants

The sample comprised 282 children (146 boys and 136 girls), ranging in age from 11 to 15 years with a mean of 13.87 years (SD = 0.75). Participants from four Dutch state high schools were recruited via telephone. The sample varied considerably in ethnic and social background, in line with the general Dutch population. Children identified by their teachers as having special needs were excluded from the analyses.

Measures

Trait Emotional Intelligence Questionnaire-Adolescent Short Form

Trait Emotional Intelligence Questionnaire-Adolescent Short Form (TEIQue-ASF; Petrides, Sangareau, Furnham, & Frederickson, 2006) is a simplified version, in terms of wording and syntactic complexity, of the adult short form of the TEIQue. The scale includes 30 short statements responded to on a seven-point Likert scale (e.g. 'I often find it hard to understand other people'). All items are sampled from the 15 subscales of the adult trait EI sampling domain (two items per subscale). Higher scores on the TEIQue-ASF indicated higher levels of trait EI.

The inventory was translated into Dutch and initially piloted on a sample of 18 children, ranging in age from 10 to 12 years, in order to ensure comprehensibility. Ten translated items were further simplified as a result of this process. The internal consistency of the Dutch TEIQue-ASF was .81 on the total sample (N = 282).

Utrechtse Coping Lijst voor Adolescenten

Utrechtse Coping Lijst voor Adolescenten (UCL-A; Bijstra, Jackson, & Bosman, 1994) is a Dutch measure of coping styles in adolescence. It consists of 47 items responded to on a four-point Likert scale (e.g. 'I often share my worries with someone') assessing, in total, seven distinct subscales. The seven subscales are confrontation (disentangling the situation and working in a goal-oriented way to solve the problem), palliative coping (seeking distraction to avoid thinking about the problem), avoidant coping (ignoring the problem or running away from it), seeking social support (looking for comfort and understanding from other people), depressive coping (becoming overwhelmed by the problem), showing emotions (revealing frustration and anger about the problem) and optimistic coping (developing reassuring and comforting thoughts). Further information about the UCL-A subscales is presented in Table 1. The internal consistencies of the inventory were generally high, with the exceptions of depressive coping ($\alpha = .53$), showing emotions ($\alpha = .56$) and avoidant coping ($\alpha = .67$). The alphas of these subscales, especially depressive coping, indicate some degree of heterogeneity in the items. The internal consistency of the overall scale was .81.

A principal component analysis with VARIMAX rotation was conducted at the subscale-level, in order to identify clusters of variables in the UCL-A that share variation. Based on the aims of the study and the Scree test, two factors, accounting for 49.8% of the variance, were extracted. The first factor (adaptive coping styles) comprised

Table 1. Internal consistencies of the UCL-A subscales (N = 282)

Scale	Number of items	Alpha
Confrontational coping	7	.73
Palliative coping	8	.71
Avoidant coping	8	.67
Social support	6	.83
Depressive coping	7	.53
Showing emotions	3	.56
Optimistic coping	5	.71

adaptive reaction strategies (confrontational, seeking social support, and optimistic coping), whereas the second factor (maladaptive coping styles) comprised maladaptive reaction strategies (avoidant, palliative and depressive coping). Factor scores were estimated by taking the mean of the relevant subscale scores. The alphas of the two factors were .76 and .75, respectively.

Children's Depression Inventory

Children's Depression Inventory (CDI; Kovacs, 1985; Timbremont & Braet, 2001) is the Dutch version of a 28-item questionnaire measuring cognitive and somatic symptoms of depression (e.g. 'When something bad happens, it is my fault'). Items are rated on a three-point scale of symptom severity. The internal consistency of the scale on this sample was .84. High scores on this scale indicated more severe self-reported depressive symptoms.

Somatic Complaints List

Somatic Complaints List (SCL; Rieffe, Meerum Terwogt, & Bosch, 2004; Rieffe, Oosterveld, & Meerum Terwogt, 2006) is a Dutch scale, which assesses how often children and adolescents experience pain. The SCL includes 10 items (e.g. 'I have a headache.') to which participants respond on a three-point Likert scale. The SCL exhibited good internal consistency on this sample ($\alpha = .80$). High scores on this scale indicated a higher frequency of complaints.

Guess Who peer assessment

Guess Who peer assessment is an adaptation of Coie and Dodge's (1988) peer assessment model based on unlimited nominations and proportion scores. We focussed on two prosocial and two antisocial descriptions. Children were asked to nominate all classmates who fitted the following behavioural descriptions: cooperation, disruption, aggression and leadership. The responses were processed to show the proportion of classroom peers nominating each pupil as fitting each description. A global score for social competence was calculated for each pupil by summing up nominations on cooperation and leadership and subtracting nominations on disruption and aggression. Thus, larger positive scores were indicative of higher social competence.

Procedure

Schools were contacted via telephone and were given details about the study. Interested schools were visited and further details were provided to the head teachers. In all cases,

consent was obtained from participants' parents. Verbal and written instructions describing the procedure were given to the children. The questionnaires were completed under supervision during normal class periods. The researcher, the teacher and in some cases both, were present to ensure confidentiality and independent responding. All children were informed that they could withdraw from the study at any point.

Results

Gender differences

We tested for gender differences in trait EI through an independent samples *t*-test. The *t*-test did not reveal significant mean differences (t(252) = .965, p > .05). However, the absence of gender differences in a construct's mean does not indicate that its relationships to other variables are invariant across gender. Although we did not have theoretical grounds to expect differential relationships, given the conspicuousness of gender differences during adolescence (Moffit, Caspi, Rutter, & Silva, 2001) and the sufficient size of our sample, we thought it useful to carry out gender-specific analyses in addition to the analyses on the total sample.

Trait El and psychological well-being

Table 2 presents the correlations between the TEIQue-ASF and the other variables in the study. The pattern of correlations was generally consistent with expectations. Specifically, trait EI was negatively correlated with depression (r = -.604, p < .01), somatic complaints (r = -.395, p < .01), and maladaptive coping styles (r = -.222, p < .01) and positively correlated with adaptive coping styles (r = .347, p < .01). A very similar pattern of correlations was obtained across gender, as can be seen in Table 2, with the sole exception of the correlation between trait EI and maladaptive coping styles ($r_{(boys)} = -.308$, p < .01; $r_{(girls)} = -.127$, p = ns).

The relationship between trait EI and coping was further explored using the seven coping styles subscales. Table 3 shows that trait EI was related positively to social support ($r_{(boys)} = .189$, p < .05; $r_{(girls)} = .329$, p < .01) and negatively to depressive coping ($r_{(boys)} = -.422$, p < .01; $r_{(girls)} = -.432$, p < .01) in both boys and girls. As regards gender-based discrepancies, trait EI correlated with avoidant coping in boys (r = -.198, p < .05), but not in girls (r = -.051, p = ns). In contrast, it correlated negatively with showing emotions (r = -.328, p < .01) and positively with optimistic coping (r = .265, p < .01) in girls, but not in boys (r = -.062, p = ns and r = .117, p = ns, respectively).

Trait El and peer-rated social competence

The analyses in this section examined whether trait emotional self-efficacy (trait EI) bears on how children are perceived by their classmates. On the total sample, high trait EI scores were related to more nominations for social competence (r = .230, p < .01). Gender-specific analyses revealed that, in both boys and girls, trait EI was positively related to nominations for social competence (r = .244, p < .01; r = .299, p < .01, respectively) and cooperation (r = .348, p < .01; r = .225, p < .05, respectively). Girls, but not boys, gave more nominations for leadership to their high trait EI classmates (r = .201, p < .05).

Table 2. Boy, girl, and tota	l sample means, SD	s, and intercorrel	ations for the varia	ables in the study		
Variables	Trait El	CDI	SCL	Adaptive coping	Maladaptive coping	Social competence
Boys (N = 146)						
Trait El	I					
CDI	— .652** ^{,a}	I				
SCL	— .277** ^{,a}	.416**	I			
Adaptive coping	.319**	205*	— . I 60	I		
Maladaptive coping	308**	.399**	.123	.239**	Ι	
Social competence	.244 ^{**,a}	258**	251**	.054	106	I
Girls $(N = 136)$						
Trait El	I					
CDI	— .564**	I				
SCL	502**	.567**	I			
Adaptive coping	.396**	200*	214*	I		
Maladaptive coping	127	.336**	.183*	.194*	Ι	
Social competence	.299**	— . 326 **	— . I 37	.043	— .057	I
Total sample ($N = 282$)						
Trait El	I					
CDI	— .604** ^{.a}	I				
SCL	—.395** ^{,a}	.496**	I			
Adaptive coping	.347**	— . 99 **	—. 167 **	I		
Maladaptive coping	222**	.367**	.154**	.218**	Ι	
Social competence	.230** ^{,a}	264**	— .139 *	.066	080	I
Mean	5.01	1.24	1.61	12.02	16.10	2.43
Standard deviation	0.59	0.17	0.32	1.81	2.40	6.15
^a One outlier (standardized *p < .05; **p < .01.	residual > 3.5 SD) was eliminated fi	om the boy samp	jej		

Table 3. Boy and girl inter	correlations	between ti	rait El, the	UCL-A vari	ables, and	the nomina	ttion propo	rtions for tl	ne four beh	iavioural de	scriptions	
Variables	_	2	c	4	5	9	7	8	6	01	=	12
I. Trait El	I	.407**	.106	05	.329**	432**	328**	.265**	121	— .067	.225*	.201*
2. Confrontational coping	.448**	I	.270**	.046	.242**	231**	170*	.503**	.029	.043	.041	.039
3. Palliative coping	095	.197*	I	.421**	.112	.174*	008	.567**	.123	.098	096	- 001
4. Avoidant coping	198*	003	.415**	I	087	.230**	– .092	.344**	107	170*	— .047	029
5. Seeking social support	.189*	.275**	.209*	033	I	207*	.023	.016	127	109	.022	060
6. Depressive coping	422**	– .081	.189*	.169*	.073	I	.244**	.035	055	100	066	067
7. Showing emotions	— .062	.039	.073	.093	.160	.129	I	– .243**	.344**	.271**	–.133	009
8. Optimistic coping	.117	.422**	.499**	.131	.247*	.015	109	I	069	129	9H.	052
9. Aggression	—.147	.092	.041	.068	045	032	.298**	163*	I	.546**	214*	029
10. Disruption	013	.140	900.	.113	023	033	.203*	085	.642**	I	–.178*	.248**
II. Co-operation	.348**	.165*	.008	– .044	.062	–.158	254**	.240**	281**	255**	I	.380**
12. Leadership	.021	601.	019	073	.110	108	— .040	049	.216**	.007	.362**	I
	-	-			-	-						

Note. Correlations below the diagonal are for boys (N = 130). Correlations above the diagonal are for girls (N = 124). p < .05, p < .01.

Trait emotional intelligence 269

Trait El and somatic complaints

Possible trait EI effects (direct or moderating) on somatic complaints were examined through a series of moderated multiple regressions with trait EI, depression and their interaction (trait EI \times depression) as the three regressors. The results of the regressions in the total, boy and girl samples are summarized in Table 4.

Table 4. Moderated multiple regression results for predictors of somatic complaints in boys, girls and the total sample

Regression	Beta	t
Boys		
$F(3, 117) = 9.80; R_{adi}^2 = .18$		
Trait El	019	.174
CDI	.432	3.78**
$TEI \times CDI$	009	.104
Girls		
$F(3, 118) = 28.30; R_{adi}^2 = .40$		
Trait El	260	3.06**
CDI	.349	3.90**
$TEI \times CDI$	219	2.89**
Total sample		
$F(3, 239) = 33.28; R_{adi}^2 = .28$		
Trait El	156	2.28*
CDI	.382	5.34**
TEI × CDI	120	2.09*

*p < .05; **p < .01.

The model for the total sample was significant (F(3, 239) = 33.28; $R_{adj}^2 = .28$, p < .01). Depression emerged as the strongest predictor of somatic complaints ($\beta = 0.382, t = 5.34, p < .01$), followed by trait EI ($\beta = -0.156, t = 2.28, p < .05$) and their interaction ($\beta = -0.120, t = 2.09, p < .05$). At low levels of trait emotional self-efficacy (-1 *SD*), there was a strong positive relationship between depression and somatic complaints. This relationship gradually weakened as trait EI scores increased, until we reached the region of high trait emotional self-efficacy (+1 *SD*) wherein depression was only weakly associated with somatic complaints.

A very similar pattern of results was obtained for girls, with the regression equation reaching statistical significance (F(3, 118) = 28.30; $R_{adj}^2 = .40$, p < .01). Depression again emerged as the strongest predictor in the model ($\beta = 0.349$, t = 3.90, p < .01), followed by trait EI ($\beta = -0.260$, t = 3.06, p < .01) and their interaction ($\beta = -0.219$, t = 2.89, p < .01; see Figure 1 for the simple slopes data plot). Trait emotional self-efficacy moderated the effects of depression on somatic complaints, such that they became stronger with decreasing trait EI scores. The regression for boys also reached significance (F(3, 117) = 9.80; $R_{adj}^2 = .18$, p < .01). In this case, however, depression was the only reliable predictor in the model ($\beta = 0.432$, t = 3.78, p < .01). Thus, there were no trait EI effects, direct or moderating, in the boy sample ($\beta = -0.019$, t = .174, p = ns; $\beta = -0.009$, t = .104, p = ns, respectively).



Figure 1. Simple slopes data plots of the bilinear trait $EI \times$ depression interaction for somatic complaints in girls.

Discussion

Our research complements existing evidence documenting the substantial impact of trait EI self-perceptions and dispositions on peer relations, psychopathology and overall psychological well-being. Consistent with our hypotheses and previous findings (e.g. Ciarrochi, Chan, & Bajgar, 2001; Martinez-Pons, 1997; Palmer *et al.*, 2002; Petrides, Sangareau *et al.*, 2006), the construct related negatively to depression, somatic complaints and maladaptive coping styles, and positively to peer-rated social competence and adaptive coping styles. There were no gender differences in trait EI, although there were discrepancies across the boy and girl data in its relationships with other variables. These were most salient in the effects on somatic complaints, which included a significant interaction with depression in girls, but not in boys.

Trait El and psychological well-being

In line with related research on adults (e.g. Dawda & Hart, 2000; Martinez-Pons, 1997), we found that adolescents who perceive themselves as being in touch with their emotions and able to regulate them tend to report less depression and physical pain. In other words, high trait EI adolescents seem to be less vulnerable to psychological disorders compared to their low trait EI peers, a significant finding given that approximately 28% of adolescents will have suffered an episode of major depressive disorder by the time they reach 19 years (Lewinsohn, Rohde, & Seeley, 1998).

Trait EI also bears on the strategies individuals employ to cope with everyday problems. As this study shows, high trait EI boys and girls have an advantage in terms of effective coping, which echoes robust findings that have been replicated cross-culturally on adults (Petrides, Pérez-González *et al.*, 2007). The well-being component of trait EI may be especially relevant in the adjustment process, since positive emotions are conducive to the development of those physical, intellectual and social resources that are necessary for successful coping (Frederickson, 1998).

Trait El and peer-rated social competence

Trait EI was positively associated with peer-rated social competence, especially prosocial behaviour. This relationship stemmed largely from a positive correlation with nominations for being cooperative, suggesting that high trait EI adolescents possess and exhibit social skills that are readily detected by their peers. As in Petrides, Sangareau *et al.* (2006), there was a negative correlation between trait EI and peer-rated aggression, which did not, however, reach significance on this sample. Another replicated association, although only in the girl sample, involved trait EI and peer-rated leadership. The gender discrepancy suggests that girls place more value on, and consequently are more attuned to, the socioemotional facets of trait EI, which they may be interpreting as leadership qualities.

The positive association of trait EI with peer-rated social competence has both theoretical and practical implications. First, it seems clear that a person's trait emotional self-efficacy is related to their social skills, as perceived by others who know them. This is another indication that trait EI self-perceptions are, at least partially, accurate (Petrides & Furnham, 2003). Second, high trait EI adolescents seem to be more likely to enjoy fulfilling personal relationships during a period when they are crucial to personal development (Pellegrini & Blatchford, 2000). Indeed, social status has consistently emerged as a predictor of internalized disorders (Merrell & Gimpel, 1998), whereas peer rejection, unpopularity and social withdrawal are typical causes of depression and isolated loneliness (Asher & Wheeler, 1985). Peer popularity and larger social networks are part of the mechanisms helping high trait EI individuals to experience lower levels of psychopathology, antisocial behaviour and delinquency (Austin, Saklofske, & Egan, 2005).

Depression co-occurs with persistent pain symptoms (Harma *et al.*, 2002) and poorer health in teenagers (De Matos, Barrett, Dadds, & Shortt, 2003). Our findings indicate that trait EI could act as a protective factor against psychological disorders, including psychosomatic complaints. The results of the multiple regressions showed that, for individuals with low trait EI scores, the relationship between depression and somatic complaints is particularly strong. In contrast, for individuals with high trait EI scores it is considerably weaker, which suggests that certain trait EI facets are involved in the prevention of depression somatization.

Gender-specific analyses

There were no gender differences in trait EI scores on this sample. This finding has been consistently replicated in studies with adults (Petrides, Furnham, & Martin, 2004), where the equality at global level is the result of moderate-to-strong gender differences in opposite directions at subscale level (e.g. a male favouring difference on assertiveness counterbalances a female favouring difference on emotion expression). However, this specific pattern of results could not be corroborated in this study because the TEIQue-ASF cannot assess individual trait EI facets. More important, there could be *qualitative* differences between the adolescent and adult sampling domains of the construct (see Petrides, Sangareau *et al.*, 2006), which would render any comparison of adolescents on the facets of the adult domain difficult to interpret.

The gender-specific analyses revealed discrepancies in the relationship of trait EI with certain aspects of coping styles and peer-rated social competence as well as in its interaction with depression. These effects were statistically significant either in boys or in girls, but not in both. One should desist from invoking indirectly relevant facts,

like the higher prevalence of depression in females, in the effort to provide *post-boc* explanations for such results. In the absence of *a priori* reasons for the existence of gender-specific effects, it is always necessary to replicate the findings before offering tentative, often speculative, theoretical explanations. This is because analyses with categorical moderators have a high likelihood of producing spurious results, especially when the data at hand do not meet certain data analytic assumptions (Aguinis, 2004).

Overall, the results from the analyses on the total sample supported the hypotheses of the study and replicated previously observed relationships in both adults and adolescents. These findings shed light on the nature of the construct and help extend trait EI research into the important domain of child and adolescent psychology. They also provide concrete construct validity evidence in support of the Dutch version of the TEIQue-ASF, which can be recommended for the efficient measurement of trait emotional self-efficacy in adolescents.

Future directions

Two important tasks for future trait EI research, especially research focussing on children and adolescents, are to integrate insights from the literature on socioemotional development and to advance hypotheses that describe the mechanisms giving rise to adult trait emotional self-efficacy. In this quest, establishing the sampling domain of trait EI at childhood has to be the first priority. From a psychometric perspective, it is unwarranted to assume that the constituent facets of a construct remain unaltered (developmentally invariant) over the lifespan. This is a common assumption in the literature, whose limitations we have discussed in several articles (e.g. Petrides *et al.*, in press; Petrides, Sangareau *et al.*, 2006).

The findings of this paper highlight the relevance of trait EI in adolescence and point to potentially fruitful applications that will be of interest to clinicians, educators, parents and policymakers. The fact that trait EI affects behaviour, self-referent cognitions and mental health renders it an important variable to consider in the diagnosis of clinical disorders that are especially prevalent during and immediately after puberty (John, Caspi, Robins, Moffit, & Stouthamer-Loeber, 1994). However, further significant progress in trait EI assessment depends on the development of an operational definition tailored specifically to children and adolescents.

Acknowledgements

This research was partially supported by grant SGS/01075/G from the Nuffield Foundation (KVP).

References

Aguinis, H. (2004). Regression analysis for categorical moderators. New York: Guilford Press. Asher, S. R., & Wheeler, V. A. (1985). Children's loneliness: A comparison of rejected and neglected peer status. Journal of Consulting and Clinical Psychology, 53, 500–505.

- Austin, E. J. (2005). Emotional intelligence and emotional information processing. *Personality and Individual Differences*, *39*, 403-414.
- Austin, E. J., Saklofske, D. H., & Egan, V. (2005). Personality, well-being, and health correlates of trait emotional intelligence. *Personality and Individual Differences*, 38, 547–558.
- Bijstra, J. O., Jackson, S., & Bosma, H. A. (1994). De Utrechtse coping lijst voor adolescenten [The Utrecht coping list for adolescents]. *Kind en Adolescent*, *15*, 98-109.

- Ciarrochi, J. V., Chan, A. Y. C., & Bajgar, J. (2001). Measuring emotional intelligence in adolescents. *Personality and Individual Differences*, *31*, 1105–1119.
- Coie, J. D., & Dodge, K. A. (1988). Multiple resources of data on social behavior and social status in the school: A cross-age comparison. *Child Development*, 59, 815–829.
- Davies, M., Stankov, L., & Roberts, R. D. (1998). Emotional intelligence: In search of an elusive construct. *Journal of Personality and Social Psychology*, 75, 989–1015.
- Dawda, D., & Hart, S. D. (2000). Assessing emotional intelligence: Reliability and validity of the Bar-On Emotional Quotient-Inventory (EQ-i) in university students. *Personality and Individual Differences*, 28, 797-812.
- De Matos, M. G., Barrett, P., Dadds, M., & Shortt, A. (2003). Anxiety, depression, and peer relationships during adolescence: Results from the Portuguese national health behaviour in school-aged children survey. *European Journal of Psychology of Education*, *18*, 3-14.
- Epstein, S. (1998). *Constructive thinking: The key to emotional intelligence*. Westport, CT: Praeger Publishers.
- Frederickson, B. L. (1998). What good are positive emotions? *Review of General Psychology*, *2*, 300–319.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York: Basic Books.
- Goleman, D. (1995). Emotional intelligence: Why it can matter more than IQ. London: Bloomsbury.
- Harma, A. M., Kaltiala-Heino, R., Rimpela, M., & Rantanen, P. (2002). Are adolescents with frequent pain symptoms more depressed? *Scandinavian Journal of Primary Health Care*, 20, 92–96.
- John, O. P., Caspi, A., Robins, R. W., Moffit, T. E., & Stouthamer-Loeber, M. (1994). The Little Five: Exploring the nomological network of the Five-Factor model of the personality in adolescent boys. *Child Development*, 65, 160–178.
- Kovacs, M. (1985). The children's depression, inventory (CDI). *Psychopharmacological Bulletin*, *21*, 995–998.
- Leuner, B. (1966). Emotional intelligence and emancipation. *Praxis der Kinderpsychologie und Kinderpsychiatrie*, *15*, 193-203.
- Lewinsohn, P. M., Rohde, P., & Seeley, J. R. (1998). Major depressive disorder in older adolescents: Prevalence, risk factors, and clinical implications. *Clinical Psychology Review*, 18, 765-794.
- Martinez-Pons, M. (1997). The relation of emotional intelligence with selected areas of personal functioning. *Imagination, Cognition and Personality*, *17*, 3-13.
- Mathews, G., Zeidner, M., & Roberts, R. D. (2002). *Emotional intelligence: Science and myth*. Cambridge, MA: MIT Press.
- Megerian, L. E., & Sosik, J. J. (1996). An affair of the heart: Emotional intelligence and transformational leadership. *Journal of Leadership Studies*, *3*, 31-48.
- Merrell, K. W., & Gimpel, G. A. (1998). Social skills of children and adolescents: Conceptualization, assessment, treatment. New Jersey: Erlbaum.
- Mikolajczak, M., Luminet, O., & Menil, C. (2006). Predicting resistance to stress: Incremental validity of trait emotional intelligence over alexithymia and optimism. *Psicothema*, *18*, 79–88.
- Moffitt, T. E., Caspi, A., Rutter, M., & Silva, P. A. (2001). *Sex differences in antisocial behaviour*. Cambridge: Cambridge University Press.
- O'Connor, R. M., & Little, I. S. (2003). Revisiting the predictive validity of emotional intelligence: Self-report versus ability-based measures. *Personality and Individual Differences*, *35*, 1893–1902.
- Palmer, B., Donaldson, C., & Stough, C. (2002). Emotional intelligence and life satisfaction. *Personality and Individual Differences*, *33*, 1091-1100.
- Payne, W. L. (1986). A study of emotion: Developing emotional intelligence, self-integration, relating to fear, pain, and desire. *Dissertation abstracts international*, 47, 203.
- Pellegrini, A. D., & Blatchford, P. (2000). *The child at school: Interactions with peers and teachers*. London: Arnold.

- Petrides, K. V., Frederickson, N., & Furnham, A. (2004). The role of trait emotional intelligence in academic performance and deviant behaviour at school. *Personality and Individual Differences*, *36*, 277–293.
- Petrides, K. V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*, *29*, 313-320.
- Petrides, K. V., & Furnham, A. (2001). Trait emotional intelligence: Psychometric investigation with reference to established trait taxonomies. *European Journal of Personality*, *15*, 425-448.
- Petrides, K. V., & Furnham, A. (2003). Trait emotional intelligence: Behavioural validation in two studies of emotion recognition and reactivity to mood induction. *European Journal of Personality*, 17, 39-57.
- Petrides, K. V., Furnham, A., & Martin, N. G. (2004). Estimates of emotional intelligence and psychometric intelligence: Evidence for gender-based stereotypes. *Journal of Social Psychology*, *144*, 149–162.
- Petrides, K. V., Furnham, A., & Mavroveli, S. (in press). Trait emotional intelligence: Moving forward in the field of EI. In G. Matthews, M. Zeidner, & R. Roberts, (Eds.), *Emotional intelligence: Knowns and unknowns* (Series in Affective Science). Oxford: Oxford University Press.
- Petrides, K. V., Pérez-González, J. C., & Furnham, A. (2007). On the criterion and incremental validity of trait emotional intelligence. *Cognition and Emotion*, *21*, 26-55.
- Petrides, K. V., Pita, R., & Kokkinaki, F. (2007). The location of trait emotional intelligence in personality factor space. *British Journal of Psychology*, *98*, 273-289.
- Petrides, K. V., Sangareau, Y., Furnham, A., & Frederickson, N. (2006). Trait emotional intelligence and children's peer relations at school. *Social Development*, *15*, 537–547.
- Rieffe, C., Meerum Terwogt, M., & Bosch, J. D. (2004). Emotional awareness and somatic complaints in children. *European Journal of Developmental Psychology*, *1*, 31–47.
- Rieffe, C., Oosterveld, P., & Meerum Terwogt, M. (2006). An alexithymia questionnaire for children: Factorial and concurrent validation results. *Personality and Individual Differences*, 40, 123-133.
- Saklofske, D. H., Austin, E. J., & Minski, P. S. (2003). Factor structure and validity of a trait emotional intelligence measure. *Personality and Individual Differences*, *34*, 707–721.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality*, 9, 185-211.
- Thorndike, E. L. (1920). Intelligence and its uses. Harper's Magazine, 140, 227-235.
- Timbremont, B., & Braet, C. (2001). Psychometrische evaluatie van de Nederlandstalige children's depression inventory. *Gedragstherapie*, *34*, 229-242.
- Van der Zee, K., & Wabeke, R. (2004). Is trait emotional intelligence simply or more than just a trait? *European Journal of Personality*, *18*, 243-263.
- Warwick, J., & Nettelbeck, T. (2004). Emotional intelligence is . . .? *Personality and Individual Differences*, *37*, 1091-1100.
- Wong, C. S., & Law, K. S. (2002). The effects of leader and follower emotional intelligence on performance attitude: An exploratory study. *Leadership Quarterly*, *13*, 243–274.
- Zacharatos, A., Barling, J., & Kelloway, E. K. (2000). Development and effects of transformational leadership in adolescents. *Leadership Quarterly*, *11*, 211–226.

Received 2 February 2006; revised version received 10 May 2006