

# Emotional Intelligence and Social Interest: are they related constructs?

Andres Chamorro<sup>1</sup> & Ursula Oberst<sup>2</sup>

<sup>1</sup> Universidad Autónoma de Barcelona

<sup>2</sup> Universitat Ramon Llull

Accepted: 24-10-2011

Received: 21-1-2011

## Emotional Intelligence and Social Interest: are they related constructs

**Summary.** In the last 15 years, a new psychological construct has emerged in the field of psychology: Emotional Intelligence. Some models of Emotional Intelligence bear resemblance with aspects of one of the core constructs of Adlerian Psychology: Social Interest. The authors investigated, if both constructs are also empirically related and which is their capacity to predict psychiatric symptoms and antisocial behavior. Results indicate that Social Interest and Emotional Intelligence are empirically different constructs; Social Interest was negatively correlated to aspects of antisocial attitudes (but not to antisocial behavior). Social Interest also failed to predict symptoms of psychological distress. Emotional Intelligence, in change, was a better predictor for mental problems than Social Interest. The results are discussed in view of the validity of Social Interest measurement.

**Key words:** Emotional intelligence, social interest, antisocial behavior, positive psychology, prosocial behaviora.

## Intel·ligència emocional i interès social: són constructes relacionats

**Resum.** En els últims 15 anys, un constructe psicològic s'ha desenvolupat en el camp de la psicologia: Intel·ligència Emocional. Alguns models de la intel·ligència emocional mantenen similituds amb un dels principals constructes de la psicologia Adleriana: Interès Social. Els autors van investigar si tots dos constructes estan també empíricament relacionats i la seva capacitat per predir els símptomes psiquiàtrics i la conducta antisocial. Els resultats indiquen que el interès social i la intel·ligència emocional són constructes empíricament diferents, el interès social es va correlacionar negativament amb aspectes de les actituds antisocials (però no amb la conducta antisocial). El Interès Social també va fallar en predir els símptomes d'angoixa psicològica. La intel·ligència emocional, en canvi, va ser un millor predictor dels problemes mentals que el Interès Social. Els resultats es discuteixen en el punt de vista de la validesa del mesurament del Interès Social

**Paraules clau:** Intel·ligència emocional, interès social, conducta antisocial, psicologia positiva, conducta prosocial.

**Correspondence**  
**Andrés Chamorro**

Facultad de Psicología  
Universidad Autónoma de Barcelona  
Edificio B. Campus de Bellaterra. 08193  
Bellaterra.  
E-mail: andres.chamarro@uab.es

## Introduction

During the last decade, in the framework of the so-called «Positive Psychology» (Seligman, 2002) a new realm of research has emerged. According to a fundamental paper by Seligman (2004), the «disease model» of psychology is giving way to a more health oriented psychology, which emphasizes human strengths and virtues as a source of personal growth and studies the factors that contribute to buffer against mental illness. Among other aims of Positive Psychology, Seligman observes a shift from the egocentric to the philanthropic, a claim to encourage people to engage in prosocial behaviour. It seems that some positive personality traits, like optimism, resilience, etc. have a protective effect on physical health and stress-related symptoms (Schwartz & Sendor, 1999), and that altruistic behaviours are associated with better mental health (Schwartz, Bell Meisenhelder, Ma, & Reed, 2003).

This aspect of Positive Psychology, the relationship of «doing well by doing good» (Piliavin, 2003) is not new to Adlerians, because the psychological model that has most dealt with the relationship of the individual with others, the link between mental health and moral behaviour, is Individual Psychology, with its core concept of social interest (SI), and which claims a relationship between prosocial behaviour and psychological health. Recently, Adlerians have pointed out the relatedness of Adlerian concepts to the tenets of Positive Psychology (Carlson, Watts, & Maniaci, 2006; Leak & Leak, 2006), especially with respect to the relationship between prosocialness and social interest. Leak and Leak (2006) for example, found a positive correlation between a measure of social interest (the Social Interest Index by Greever, Tseng, & Friedland) and some measures of positive psychological functioning; the authors propose the integration of social interest into Positive Psychology.

Although SI has stimulated a great body of theoretical considerations and empirical research, it is still a difficult concept to define. Among all attempts made to give an operationalization of this construct, there seems to be a consensus that SI has the following aspects: a sense of social embeddedness (belonging to a family, a community, etc.); empathy («to see with the eyes of another, to hear with the ears of another, to feel with the heart of another», Adler, cited in Ansbacher & Ansbacher, 1956/1964, p.135); a prosocial (altruistic) attitude defined as the capacity to value the interests and welfare of others even when these have no personal utility (Crandall, 1981). Thus, prosocialness is one core aspects of SI and can be defined as the tendency to perform acts of helping, sharing and taking care of other people. Some Adlerians have also pointed out the link between SI and moral behaviour and the idea that an antisocial individual cannot be considered mentally healthy (Oberst & Stewart, 2003). Adler already assumed that SI is an innate aptitude of the human being that has to be

fostered by early caregivers and developed into the ability to cooperate with others and contribute to the common well-being. Adlerians also assume (Manaster, Cemalcilar, & Knill, 2003) that there are correlates or by-products of SI such as courage, self-confidence, caring and compassion, altruism, and a favourable view of human nature. Adler believed that all failures in life were related to low social interest (Adler, 1931), and one of the most important tenets of Adlerian theory is the view that psychological problems and mental disorders are related to a lack of SI. The deficits in SI are also expressed as a striving for superiority; therefore, one of the goals in Adlerian psychotherapy is the developing of SI in the client as a means of enhancing mental health and psychological adjustment.

Many Adlerian authors have pointed out the positive outcomes of SI for general and mental health (e.g. Nikelly, 2005) and that lacking SI is related to an increased risk of physical and/or psychological disorder (Raeshide and Kern, 1991). In a variety of empirical studies, SI has shown to correlate with a variety of indicators for psychological adjustment, well-being, life-satisfaction, etc. and to correlate negatively with psychiatric symptoms and disorders (anxiety, depression, substance abuse, etc.) and negatively rated personality variables, such as narcissism, dominance, etc. There was also a positive association of SI with perceived meaningfulness of life (Mozdzierz, Greenblatt, & Murphy, 1986) and a negative with hopelessness (Millor, Denton, & Tobacyk, 1986).

## Emotional intelligence

Emotional Intelligence is another concept that appears in the context of Positive Psychology (Salovey, Caruso & Mayer, 2004; Grewal & Salovey, 2006) and deals with aspects of prosocialness on one hand (Charbonneau & Nicol, 2002; Lopes, Salovey & Coté, 2005) and well-being on another (Austin, Saklofske & Egan, 2005). The concept of EI has stimulated a great deal of more or less serious publications since the expression was coined by Salovey & Mayer (1990) and made popular by Goleman (1995). Although the construct of EI was criticized for lacking construct validity (e.g. Davies, Stankov, & Roberts, 1998) and for failing to predict the promised outcomes in terms of incremental predictive validity for success (Newsome, Day, & Catano, 2000), the proponents of EI claim a positive relationship between EI and psychological health and psychological adjustment as well as success in life. Popular science publications like those written by Goleman give the impression that EI is the panacea of happiness. As Goleman stated, EI will confer «an advantage in any domain in life, whether in romance and intimate relationships or picking up the unspoken rules that govern success in organizational politics» (Goleman, 1995, p. 36). In his first publications, Goleman assured that EI contributes to success in just any

domain of human life, much more than intelligence would do. From a scientific standpoint, Goleman's optimistic claims are untenable, and his model was criticized for containing «nearly everything but IQ», including residual factors such as personality traits, motivations, attitudes, human virtues, etc. But it is Goleman's merit to have stimulated the interest in EI and, at the same time, empirically based models of EI were developed.

Thus, in the last two decades, a growing amount of serious scientific research has emerged that relates psychological well-being to high EI (Oberst & Lizeretti, 2004). People who score high on standard EI instruments also report higher psychological well-being, higher quality and magnitude of social relationships, a more positive family climate, higher academic success (Brackett & Mayer, 2003), higher life-satisfaction (Palmer, Donaldson & Stough, 2002), and higher prosocial behaviour (Charbonneau & Nicol, 2002) than people with lower EI. According to these studies, high EI individuals engage in less deviant behaviour, in less substance and alcohol abuse and possess less self-help books (the possession of self-help books is thought to be an indicator of the existence of psychological problems). In a similar line, other empirical studies have also related EI to different indicators of success in life and to psychological adjustment in critical life situations (Extremera & Fernández-Berrocá, 2006). Thus, it can be assumed that having a high degree of EI also contributes to mental health. Most of these studies were conducted with normal subjects (without psychological disorders); a recent study with different groups of psychiatric outpatients showed that some disorders (especially agoraphobia and depression) are related to a certain deficit in EI (Lizeretti, Oberst, Chamarro, & Farriols, 2006).

Several models of EI have been proposed by different authors, and the definitions and consequently, the measurement of EI are not homogenous. According to Petrides & Furnham (2000), we can distinguish two main models of EI: the ability models and the mixed models. In the most frequently cited ability model, the one developed by Mayer, Salovey, and Caruso (2000), EI is considered to be a set of cognitive-emotional abilities (perception, appreciation and expression of emotions; emotional facilitation of thought; understanding, analysis and use of emotional knowledge; reflexive regulation of emotions).

The mixed models of EI (e.g. Bar-On, 1997; Boyatzis, Goleman & Rhee, 2000) incorporate aspects of personality traits, of motivation, of self-concept, etc., into the set of abilities of perceiving, expressing, and dealing with emotions. Goleman (1995) had created a model with five broad areas, which include aspects that go far beyond the dealing with emotions, such as zeal, persistence, and self-control, self-motivation, impulse control, delay of gratification, self-regulation of affective states, stress-avoidance, etc. The model developed by Bar-On (1997) also includes

broad concepts such as interpersonal intelligence (consisting of emotional self-consciousness, assertiveness, self-regard, self-actualization, independence); intrapersonal intelligence (empathy, interpersonal relationship, social responsibility); adaptation (problem solving, reality testing, flexibility); stress management (stress tolerance, impulse control); good mood (happiness, optimism).

The convenience of considering EI to be a set of cognitive-emotional abilities or to include aspects of personality, talents, or even human virtues has been discussed among researchers of EI (Hedlund & Sternberg, 2000; Chamarro & Oberst, 2004), without having reached consensus. The advantage of considering EI to be a cognitive-emotional ability (just like general intelligence), is the assumption that these abilities can be learned and trained; in the mixed model, however, EI includes personality aspects, which are usually supposed to be more stable and inflexible along lifetime. While in studies on personality and psychological adjustment researchers seem to rely on the ability model, in studies that deal with the application of EI at the workplace, in leadership, social competencies, learning style, etc., most other seem to prefer one of the mixed models.

To summarize the theories of EI for the purpose of our article, we can state that there is still no consensus for the definition and measurement of this new psychological construct. In any case, the relationship between EI and psychological health seems to be well established; the relationship between EI and positive personality aspects is less clear. In any case, we can infer that a high degree of EI contributes to psychological health as well as to establish healthy relationships with others.

#### **Purpose of this study**

Up to date, there are neither theoretical nor empirical publications that claim a relationship of SI and EI, but given that both theories claim to be able to predict prosocial behaviour as well as mental health, we can claim that EI and SI should be related constructs, i.e. individuals with high SI should also have a high degree of EI. The aspect of dealing with emotions is present in the construct of SI; empathy with the feelings of others is considered a core element of SI. McCown, Johnson, Silverman and Austin (1988) found that subjects lacking SI (schizophrenics and delinquents) have a lower recognition of facial affects of emotion.

The purpose of our study is to investigate the relationship between SI and EI. If SI and EI are related constructs, our study should yield a positive correlation between both. Individuals with high SI/EI should also engage in less antisocial behaviour and report less psychiatric symptoms. It was predicted that individuals with high SI and/or high EI would have lower scores on an antisocial behaviour questionnaire and lower scores on a self-report questionnaire of psychi-

atric symptoms. We also predicted a negative correlation between SI and EI on one hand and Neuroticism (as indicator of depressive and anxious tendencies) and Psychoticism (as indicator of antisocial tendencies) in a standard personality questionnaire.

### Measurement of constructs

All aforementioned constructs (prosocialness, social interest, emotional intelligence) show considerable measurement problems. Apart from construct validity aspects, one of the main problems of instruments measuring positive personality traits is their high social desirability, especially when assessed with self-report questionnaires. This holds for SI as well as for EI, and even more for prosocialness, which is an elusive topic of psychological inquiry, as Caprara, Steca, Zelli, and Capanna (2005) aptly note.

As a consequence of the difficulties in defining SI with precision and due to its multidimensional nature, measurement of this construct has always been a challenge to Adlerian scholars. Stasio and Capron (1998) maintain that SI is a construct distinct from contemporary trait theories of personality (e.g. the Big Five), and from related construct such as empathy, altruism and prosocial behaviour. To date, five different instruments of SI have been developed, none of them being completely satisfying. In their meta-analysis of the existing empirical studies done with these instruments, Bass, Curlette, Kern, and McWilliams (2002) come to the following conclusions: all instruments had low pair-wise correlations, which indicates that these instruments measure different constructs or different aspects of the SI construct. The correlations of the different instruments with other theoretically related constructs (such as altruism, empathy, adjustment, etc.) were very heterogeneous. Except for one scale (the SIS by Crandall), all instruments also showed correlations with social desirability.

As discussed above, the measurement of EI depends highly on the kind of model applied. In the ability model, EI is seen as a set of cognitive-emotional abilities. Consequently, these abilities are measured by means of «tests», similar to intelligence tests, where the individual's capacities are assessed. Mayer, Salovey and Caruso developed the MSCEIT (Mayer-Salovey-Caruso Emotional Intelligence Test; Mayer, Salovey, Caruso & Sitarenios, 2003); the MSCEIT is based on the idea that EI implies the efficient solving of emotional problems and the solving of problems using one's emotions. During the construction of the MSCEIT, a normative sample of people was used to determine via consensus (agreement of the majority of subjects) which kind of answers to the different items would be considered as correct. Thus, in the MSCEIT items, the subject's answers can be right or wrong.

Being that the mixed-models relate to personality aspects, EI defined in this way is usually assessed by self-report questionnaires, such as the Emotional

Quotient Inventory (EQ-i) by Bar-On (1997). A somewhat intermediate position is occupied by the TMMS (Trait Meta-Mood Scale), a forerunner of the MSCEIT. It is based on Mayer, Salovey and Caruso's definition of EI (emotional abilities), but it is presented as a self-report questionnaire, and this is why the authors (Salovey, Mayer, Goldman, Turvey & Palfai, 1995) talk of «perceived emotional intelligence» (PEI) when referring to this questionnaire, because it is not the objective assessment of EI like in the MSCEIT, but the perception the subject has of his or her emotional abilities. Studies using the TMMS reported that individuals with good psychological adjustment show moderate scores in the subscale Attention to emotions, and high scores in the subscales Clarity and Repair of emotions (Extremera & Fernández-Berrocal, 2005).

All empirically created instruments of EI show appropriate psychometric properties. The preference of one instrument or another, however, does not depend only on the preference for one or another model, but also on their availability; for instance, a reliable cross-cultural adaptation into the Spanish context is available only for the TMMS.

### Method

Subjects. Subjects were 116 students (33 males and 83 females) of Ramon Llull University Barcelona (psychology and educational sciences) between 18 and 35 years old. All subjects were approached by an interviewer at the beginning of their classes and participated voluntarily. They were informed that they were participating in a study on Emotional Intelligence and received individual feed-back on their performance on the Emotional Intelligence scale when data collection was concluded.

### Instruments and procedure

*Social Interest (SI):* To assess SI, the Social Interest Scale (SIS) by Crandall (1975) was used, because it had shown low impact on social desirability and is most related to prosocial attitudes and altruism (Crandall, 1981). The scale consists of 24 item pairs in a forced-choice modus, i.e. respondents have to choose which of two traits in a pair they value more; the subject has to decide whether he/she would rather be (adjective) or (adjective). 9 item pairs are irrelevant and used as distracters. For the rest of the item pairs, one trait of a pair is relevant for SI and the other is not; the subject's total SI score is the number of SI traits chosen. Although it is one of the oldest instruments for SI, it is still one of the most widely used in the Adlerian context and has shown to possess good psychometric properties (see Bass et al., 2002). The items were translated into Spanish by the first author and then back-translated into English by a professional English teacher. The two English versions were compared for their divergences and then the corresponding adapta-

tions of the Spanish terms were made. *Emotional intelligence*: to assess emotional intelligence, the Spanish adapted version of the TMMS was used, the TMMS-24 (Fernández-Berrocal, Extremera, & Ramos, 2004). The TMMS-24 consists of 24 items. Respondents are asked to rate their degree of agreement on each of the 24 items on a 5-point-Likert scale. The scale is divided into three subscales, each made up by 8 items: Attention to emotions, Clarity of emotions and (capacity of) Repair of emotions. The higher the score in the Clarity and Repair scale, the higher the subject's perceived EI; with respect to the Attention scale, too much attention to one's emotions has shown to be associated with psychological maladjustment and anxiety problems; therefore, there is an optimum range considered as adequate EI (between 22 and 32 points for males and between 25 and 35 for females). The Spanish version of the scale has shown to have good psychometric properties. In the original article, Fernández-Berrocal, Extremera, and Ramos (2004) report an internal consistency of .90 for Attention, .90 for Clarity, and .86 for Repair, respectively.

*Psychological distress*: the Symptom Checklist-90 (SCL-90-R) in its Spanish adaptation (Derogatis, 2002) was used to check for complaints indicating the presence of psychological distress. The SCI-90-R is a 90-item self-assessment questionnaire for symptoms of different mental disorders; scales represent 9 primary dimensions (somatization, interpersonal sensitivity, anxiety, obsessive-compulsive behaviour, depression, hostility, phobic anxiety, psychoticism and paranoid ideation) and three global indices: Global Severity Index (GSI), designed to measure overall psychological distress; Positive Symptom Distress Index (PSDI), designed to measure the intensity of symptoms; and Positive Symptom Total (PST),

reports number of self-reported symptoms. The SCL-90 offers normative data for normal and clinical populations, males and females.

*Antisocial behavior*: an inventory of self-reported low-impact delinquency (Conducta Delictiva Autoinformada, Gomà, Grande, Valero, & Puntí, 2001) was used. Respondents have to reply affirmatively or negatively to 51 statements about antisocial behaviour of different impact (e.g. viewing pornographic movies before the age of 18; urinating in public; consuming, buying or selling illegal drugs; stealing, etc.). The total antisocial behaviour score is the number of affirmative responses.

*Personality*: the Eysenck Personality Questionnaire EPQ was used to assess the personality variables Neuroticism (as indicator of a depressive and anxious tendency) and Psychoticism (as indicator of antisocial tendencies).

### Data analysis

T-tests were run for all independent means to test for possible gender differences. To test the hypothesis of an empirical relationship between Social Interest and Emotional Intelligence and their relationship to antisocial behavior as well as to psychological distress, all variables of the study were correlated with each other. Then, a stepwise regression analysis was run in order to determine the capacity of these variables to predict antisocial behavior and the global indices of mental problems. Considering the highly significant gender difference for antisocial behavior, gender was introduced as the first predicting variable for all models, followed by SI, neuroticism, psychoticism, and finally, the three indicators of EI

**Table 1.** Means and standard deviations for males, females, and total sample, as well as Student's

	males		females		total		t
	M	SD	M	SD	M	SD	
social interest	8,19	2,245	8,77	2,919	8,61	2,747	-1,031
neuroticism	46,88	10,027	45,55	8,427	45,93	8,886	0,723
psychoticism	48,36	8,944	47,18	8,853	47,52	8,856	0,647
EI-attention	25,12	4,948	27,57	6,496	26,87	6,175	-1,947
EI-clarity	26,64	6,721	24,82	6,273	25,34	6,427	1,379
EI-repair	25,79	4,755	25,42	6,838	25,53	6,298	0,281
antisocial	13,36	6,981	8,24	6,223	9,70	6,824	3,862**
somatization	0,6415	0,61342	0,9004	0,55895	0,8267	0,58415	-2,188*
obsessions/ compulsions	1,2482	0,71155	1,3470	0,67215	1,3189	0,68193	-0,703
interpers sensitivity	0,8518	0,65411	1,0576	0,72933	0,9991	0,71206	-1,410
depression	1,0527	0,90960	1,1028	0,60696	1,0885	0,70244	-0,345
anxiety	0,8273	0,70279	1,0145	0,58396	0,9612	0,62272	-1,469
hostility	0,5864	0,50877	0,7411	0,51018	0,6971	0,51238	-1,475
phobic anxiety	0,3727	0,51487	0,4116	0,46362	0,4005	0,47680	-0,394
paranoid ideation	0,6367	0,63823	0,9340	0,77939	0,8494	0,75142	-1,946
psychoticism	0,4606	0,52496	0,6386	0,55980	0,5879	0,55375	-1,571
PST	40,85	21,391	44,88	16,795	43,73	18,215	-1,076
PSDI	1,6585	0,50253	1,8164	0,43296	1,7715	0,45722	-1,692
GSI	0,7791	0,57133	0,9392	0,46937	0,8936	0,50317	-1,555

PST: Positive symptoms (SCL-90)

PSDI: Positive symptom distress index (SCL-90)

GSI: Global severity index (SCL-90)

## Results

Table 1 shows the means and standard deviations for males and females with respect to the main variables used in this study.

As shown in table 1, t-tests for all variables revealed no significant differences between males and females, with two typical and well-known exceptions: men admit significantly more antisocial behaviour in the SDR scale ( $t=3.86$ ,  $p=.000$ ); females scored significantly higher on the somatization scale of the SCL-90 ( $t=-2.19$ ,  $p=.031$ ). Another typical difference reported by other studies (Fernández-Berrocal, Extremera, & Ramos, 2004), that females pay more attention to their emotions (EI-Attention), was only nearly significant ( $F=3.792$ ,  $p=.054$ ). No gender differences with respect to SI, clarity and repair of emotions, personality variables, and the three global values of the SCL-90 were found.

Pearson correlations, as could be expected, show that the strongest correlations are those between all SCL-90 indicators and neuroticism. Only hostility correlated with psychoticism ( $r=.275$ ,  $p=.003$ ). Both psychoticism and hostility correlated with antisocial behaviour ( $r=.389$ ,  $p=.000$  and  $r=.194$ ,  $p=.037$ , respectively). There was also a significant correlation between neuroticism and antisocial behaviour ( $r=.233$ ,  $p=.012$ ), and between neuroticism and psychoticism ( $r=.269$ ,  $p=.003$ ). Concerning our hypotheses, there was no correlation between the Social Interest score and any of the subscales of the TMMS-24; Social Interest correlated (negatively) only with both psychoticism ( $r= -.206$ ,  $p=.026$ ) and hostility ( $r=.188$ ,  $p=.043$ ), but there was no correlation with any other variable. With respect to EI, there were several significant correlations between the subscales of the TMMS-24 and indicators of mental problems. EI-Attention to emotions correlated positively with N, eight out of nine SCL-90 subscales, and with the three global SCL-90 scores; concerning EI-clarity, the effect is the reverse: clarity correlated negatively with N, with six out of nine SCL-90 subscales, and with the three global SCL-90 scores; EI-repair showed a significant negative correlation only with interpersonal sensitivity ( $r=-.211$ ,  $p=.023$ ), but with none of the global SCL-90 scores.

There were significant correlations between the subcomponents of emotional intelligence and neuroticism, positive for EI-Attention ( $r=.287$ ,  $p=.002$ ) and negative for EI-clarity ( $r=-.223$ ,  $p=.016$ ) and EI-Repair ( $r=-.230$ ,  $p=.013$ ). EI did not correlate with psychoticism nor with antisocial behaviour.

The results of the hierarchical regression analysis are shown in table 2. Gender accounted for 11% of the variance of antisocial behaviour ( $R^2=.116$ ), neuroticism accounted for an additional 4.4%, and psychoticism again for 10.3%. SI and the EI dimensions showed no effect. Thus, the best fit model for antisocial behavior showed to be the one that includes gender, neuroticism and psychoticism,

**Table 2.** Hierarchical stepwise regression results for gender, social interest, neuroticism, psychoticism, and the dimensions of emotional intelligence predicting antisocial behaviours (SDR) and global severity index (GSI)

Variable		R <sup>2</sup>	increment R <sup>2</sup>	F	β	t
SDR						
Step 1	Gender	.116	.116	14.92**	-4.7	-3.83
Step 2	N	.160	.044	5.96*	.09	1.43
Step 3	P	.265	.105	16.05**	.26	4.00
GSI						
Step 1	N	.382	.382	70.37**	.027	6.51
Step 2	EI-A	.431	.050	9.84*	.023	3.91
Step 3	EI-C	.475	.044	9.45*	-.017	-3.07

which jointly explained 26.5% of the variance ( $F=13.48$ ; 3, 112;  $p=.000$ ). With respect to the severity of symptoms, gender, SI, neuroticism, psychoticism, and EI-Repair showed no effect. Neuroticism accounted for the main increment in explained variance (increment in  $R^2=.382$ ), followed by EI-Attention and EI-Clarity (increment  $R^2=.050$  and  $R^2=.044$ , respectively). The three variables explained 47.5% of the variance of GSI ( $F=33.84$ ; 3,112;  $p=.000$ ).

To summarize, antisocial behaviour was best predicted by gender and psychoticism, whereas symptom severity was best explained by neuroticism and the attention and clarity factor of emotional intelligence.

## Discussion

The most important finding of this study was the inexistence of an empirical relationship between EI and SI. This is an indicator that though they might have similar descriptors in their theoretical framework, but are empirically different constructs. This is interesting for Adlerian theory, as it confirms the idiosyncratic meaning of the concept of Social Interest, which remains a unique concept that cannot be diluted into other notions stemming from other theories. The negative correlation of Social Interest with the personality variable of psychoticism and with hostility can be seen as an indicator of antisocial *tendencies* in the individual with low social interest, but Social Interest was not directly related with antisocial *behavior*. Contrary to our hypothesis, Social Interest was not correlated with psychiatric symptoms; in change, low EI was a better predictor of mental problems. As reported in many studies on perceived EI, higher clarity was related to lower neuroticism and fewer problems, but higher attention to emotions was related to more neuroticism and mental symptoms. As Extremera & Fernández-Berrocal state, this is due to the observation that people who are highly attentive to their emotions and moods in an effort to understand them, can develop ruminating behaviour and anxiety, especially when their capacity of understanding them is low (Extremera & Fernández-Berrocal, 2006).

Our result that (low) Social interest was neither related to more delinquent behaviour nor to more psychological problems could have several reasons, which are detailed as following:

- (1) nature of sample: subjects were mentally healthy university students, who were supposed not to have a high degree of mental disturbance nor of antisocial behaviour, as well as to have a normal degree of social interest; no extreme groups were used to compare the normal with a clinical sample and with a sample of delinquents
- (2) nature of instruments: the SIS was linguistically adapted into Spanish by a translation-backtranslation procedure, but was not previously cross-culturally validated, so the reliability of results obtained with the Spanish version is not clear; all instruments are self-report scales and though the SIS has shown to have little relationship with social desirability, the other scales do have. Subjects might have minimized their symptoms and/or delinquent behaviour or might have exaggerated perception of their emotional intelligence.
- (3) Concept of SI: research on the different instruments of SI has shown (Crandall, 1981; Bass et al., 2002) that the SIS assesses specifically the altruistic component of SI and seems less able to assess the mental health component, though this would explain its low correlation with psychiatric symptoms, but not with antisocial behaviour.

Future studies on similar issues should incorporate the use of extreme groups (mentally ill, delinquents), a previous or simultaneous cross-validation of the instruments used and assess also the positive poles of the variables (psychological well-being instead of mental problems, prosocial instead of antisocial behaviour).

### Acknowledgements

The authors wish to thank Cristina Baliarda and Margot Ripoll for their assistance in data collection.

### References

- Adler, A. (1931). *What life should mean to you*. Boston: Little, Brown & Company.
- Ansbacher, H.L. & Ansbacher, R.R. (1956/1964). *The Individual Psychology of Alfred Adler. A systematic presentation in selections from his writings*. New York: Harper and Row.
- Austin, E.J., Saklofske, D.H., & Egan, H. (2007). Personality, well-being and health correlates of trait emotional intelligence. *Personality and Individual Differences*, 38, 547-558.
- Bar-On, R. (1997). *The Emotional Intelligence Inventory (EO-I): Technical manual*. Toronto, Canada: Multi-Health Systems.
- Boyatzis, R., Goleman, D., & Rhee, K. (2000). Clustering competence in emotional intelligence: insights from the emotional competence inventory (ECI). In R. Bar-On & J.D.A. Parker, *The handbook of emotional intelligence* (pp.343-362). San Francisco: Jossey-Bass.
- 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.
- Caprara, G.V., Steca, P., Zelli, A., & Capanna, C. (2005). A new scale for measuring adults' prosocialness. *European Journal of Psychological Assessment*, 21, 77-89.
- Carlson, J., Watts, R.E., & Maniaci, M.P. (2006). The contemporary relevance of Adlerian theory. In J. Carlson, R.E. Watts, & Maniaci, M.P. (Eds.), *Adlerian therapy: theory and practice*. Washington, D.C.: American Psychological Association.
- Chamarro, A., & Oberst, U. (2004). Modelos teóricos en inteligencia emocional y su medida. *Aloma*, 14, 209-217.
- Charbonneau, D., & Nicol, A. (2002). Emotional intelligence and prosocial behaviours in adolescents. *Psychological Reports*, 90, 361-370.
- Crandall, J.E. (1975). A scale for social interest. *Journal of Individual Psychology*, 31, 187-195.
- Crandall, J.E. (1981). *Theory and measurement of social interest. Empirical tests of Alfred Adler's concept*. New York: Columbia University Press.
- 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.
- Derogatis, L.R. (2002). SCL-90-R. Cuestionario de 90 síntomas. 3<sup>rd</sup> edition. Madrid: TEA.
- Extremera, N., & Fernández-Berrocal, P. (2005). Inteligencia emocional percibida y diferencias individuales en el meta-conocimiento de los estados emocionales: una revisión de los estudios con el TMMS. *Ansiedad y Estrés*, 11, 101-122.
- Extremera, N., & Fernández-Berrocal, P. (2006). Emotional intelligence as a predictor of mental, social, and physical health in University students. *The Spanish Journal of Psychology*, 9, 45-51.
- Fernández-Berrocal, P., Extremera, N., & Ramos, N. (2004). Validity and reliability of the Spanish modified version of the Trait Meta-Mood Scale. *Psychological Reports*, 94, 751-755.
- Goleman, D. (1995). *Emotional Intelligence*. New York: Bantam Books.
- Gomà, M., Grande, I., Valero, S., & Puntí, J. (2001). Personalidad y conducta delictiva autoinformada en adultos jóvenes. *Psicothema*, 13, 252-257.
- Grewal, D., & Salovey, P. (2006). Benefits of Emotional Intelligence. In M. Csikszentmihalyi, & I. Selega (eds), *A life worth living: Contributions to positive psychology* (pp. 104-119). New York: Oxford University Press.
- Hedlund, J., & Sternberg, R.J. (2000). Too many intelligences? Integrating social, emotional and practical intelligence. In R. Bar-On & J.D.A. Parker, *The handbook of emotional intelligence* (pp.136-167). San Francisco: Jossey-Bass.
- Leak, G.K., & Leak, K.C. (2006). Adlerian Social Inter-

- est and Positive Psychology: a conceptual and empirical integration. *Journal of Individual Psychology*, 6, 207-223.
- Lizeretti, N.P., Oberst, U., Chamorro, A., & Farriols, N. (2006). Evaluación de la inteligencia emocional en pacientes con psicopatología: resultados preliminares usando el TMMS-24 y el MSCEIT. *Ansiedad y Estrés*, 12, 355-364.
- Lopes, P. N., Salovey, P., & Côté, S. (2005). Emotion regulation abilities and the quality of social interaction. *Emotion*, 5, 113-118.
- Manaster, G.J., Cemalclar, Z., & Knill, M. (2003). Social Interest, the individual, and society: practical and theoretical considerations. *The Journal of Individual Psychology*, 59, 109-122.
- Mayer, J.D., Salovey, P., & Caruso, D.R. (2000). Models of Emotional Intelligence. In R. Sternberg, *Handbook of Intelligence*. Cambridge, UK: Cambridge University Press.
- Mayer, J.D., Salovey, P., Caruso, D., & Sitarenios, G. (2003). Measuring Emotional Intelligence with the MSCEIT v. 2.0. *Emotion*, 3, 97-105.
- McCown, W., Johnson, J., Silverman, N., & Austin, S. (1988). Social Interest and recognition of facial affects of emotion. *Individual Psychology*, 44, 41-48.
- Millor, M.J., Denton, G.O., & Tobacyk, J. (1986). Social interest and feelings of hopelessness among elderly patients. *Psychological Reports*, 58, 410.
- Mozdzierz, G.J., Greenblatt, R.L., & Murphy, T.J. (1986). Social interest: the validity of two scales. *Journal of Individual Psychology*, 42, 35-43.
- Newsome, S., Day, A.L., & Catano, V.M. (2000). Assessing the predictive validity of emotional intelligence. *Personality and Individual Differences*, 29, 1005-1016.
- Nikelly, A.G. (2005). Positive health outcomes of social interest. *Journal of Individual Psychology*, 61, 329-342.
- Oberst, U., & Lizeretti, N.P. (2004). Inteligencia emocional en psicología clínica y en psicoterapia. *Revista de Psicoterapia*, 60, 5-22.
- Oberst, U., & Stewart, A. (2003). Adlerian Psychotherapy. An advanced approach to Individual Psychology. London: Routledge.
- Palmer, B., Donaldson, C., & Stough, C. (2002). Emotional intelligence and life satisfaction. *Personality and Individual Differences*, 33, 1091-1100.
- Petrides, K.V., & Furnham, A. (2000). On the dimensional structure of emotional intelligence. *Personality and Individual Differences*, 29, 313-320.
- Piliavin, J.A. (2003). Doing well by doing good: benefits for the benefactor. In C.L.M. Keyes, & J. Haidt, *Flourishing: Positive Psychology and the life well-lived* (pp. 227-247). Washington: APA.
- Rareshide, M., & Kern, R. (1991). Social interest: the haves and have nots. *Individual psychology*, 47, 464-476.
- Salovey, P., & Mayer, J.D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9, 185-211.
- Salovey, P., Caruso, D., & Mayer, J.D. (2004). Emotional Intelligence in practice. In P.A. Linley & S. Joseph, *Positive psychology in practice* (pp. 447-463). Hoboken, NJ: John Wiley & Sons.
- Salovey, P., Mayer, J.D., Goldman, S.L., Turvey, C., & Palfai, T.P. (1995). Emotional attention, clarity, and repair: exploring emotional intelligence using the Trait Meta-Mood Scale. En J.W. Pennebaker (Ed.), *Emotion, Disclosure, and Health* (pp. 125-151). Washington: American Psychological Association.
- Schwartz, C.E., & Sendor, R.M. (1999). Helping others helps oneself: response shift effects in peer support. *Social Science & Medicine*, 48, 1563-1575.
- Schwartz, C.E., Bell Meisenhelder, J., Ma, Y., & Reed, G. (2003). Altruistic social interest behaviors are associated with better mental health. *Psychosomatic Medicine*, 65, 778-785.
- Seligman (2002). *Authentic Happiness*. New York: Free Press.
- Seligman (2004). The past and future of Positive Psychology. In C.L.M. Keyes, & J. Haidt, *Flourishing: Positive Psychology and the life well-lived* (pp. xi-xx). Washington: APA.
- Stasio, M.J., & Capron, E.W. (1998). Social Interest as a distinct personality construct: comparisons with «The Big Five» and related prosocial constructs. *The Journal of Individual Psychology*, 54, 10-23.

## Resumen

### Inteligencia emocional e interés social, ¿son constructos relacionados?

En los últimos 15 años, un constructo psicológico se ha desarrollado en el campo de la psicología: Inteligencia Emocional. Algunos modelos de la inteligencia emocional mantienen similitudes con uno de los principales constructos de la psicología adleriana: Interés Social. Los autores investigaron si ambos constructos están también empíricamente relacionados y su capacidad para predecir los síntomas psiquiátricos y la conducta antisocial. Los resultados indican que el interés social y la inteligencia emocional son constructos empíricamente diferentes, el interés social se correlacionó negativamente con aspectos de las actitudes antisociales (pero no con la conducta antisocial). El Interés Social también falló en predecir los síntomas de angustia psicológica. La inteligencia emocional, en cambio, fue un mejor predictor de los problemas mentales que el Interés Social. Los resultados se discuten en el punto de vista de la validez de la medición del Interés Social.

**Palabras clave:** Inteligencia emocional, interés social, conducta antisocial, psicología positiva, conducta prosocial.