Self-concept, self-esteem and psychopathological symptoms

Maite Garaigordobil, José Ignacio Pérez and María Mozaz
University of the Basque Country

This study has two objectives: 1) to analyse the characteristics of self-concept, self-esteem and psychopathological symptoms in accordance with age and gender in a representative sample from the Basque Country; and 2) to explore the relationships of self-concept and self-esteem with psychopathological symptoms. The sample is made up of 1,579 participants, aged 12 to 65, of whom 732 are males (46.4%) and 847 are females (53.6%). The study uses a descriptive and correlational methodology. For the measurement of psychopathological symptoms, self-concept and self-esteem, three assessment instruments are applied. The ANOVAs indicated significant differences associated with age in self-concept, self-esteem, and quantity of psychopathological symptoms. As regards gender, no significant differences were found for self-concept and self-esteem, but there were differences in psychopathological symptoms, with females scoring higher in various disorders (somatization, interpersonal sensitivity, depression, anxiety, phobic anxiety, and total quantity of symptoms). The results of the correlational analyses confirmed significant inverse relationships between self-concept/self-esteem and psychopathological symptoms. The discussion considers the potential role of intervention programmes that promote self-concept and self-esteem in the prevention of psychopathological problems.

Autoconcepto, autoestima y síntomas psicopatológicos. El trabajo tiene 2 objetivos: 1) analizar las características del autoconcepto, la autoestima y los síntomas psicopatológicos, en función de la edad y el género, en una muestra representativa del País Vasco; y 2) estudiar las relaciones entre el autoconcepto y la autoestima con síntomas psicopatológicos. La muestra está constituida por 1.579 participantes de 12 a 65 años de edad, 732 son varones (46,4%) y 847 mujeres (53,6%). El estudio utiliza una metodología descriptiva y correlacional. Para medir los síntomas psicopatológicos, el autoconcepto y la autoestima se administran 3 instrumentos de evaluación. Los ANOVAs indicaron la existencia de diferencias significativas asociadas a la edad en el autoconcepto, en la autoestima y en la cantidad de síntomas psicopatológicos. En relación al género no se encontraron diferencias significativas en autoconcepto y autoestima, pero se hallaron diferencias en los síntomas psicopatológicos con puntuaciones superiores en las mujeres en varios trastornos (somatización, sensibilidad interpersonal, depresión, ansiedad, ansiedad fóbica y cantidad total de síntomas). Los resultados de los análisis correlacionales confirmaron relaciones significativas inversas entre autoconcepto y autoestima con síntomas psicopatológicos. La discusión plantea el papel que pueden tener los programas de intervención que fomentan el autoconcepto y la autoestima en la prevención de problemas psicopatológicos.

In recent years, research on self-concept and self-esteem has been gaining relevance within the context of the identification of protective factors against psychological problems. Their importance for personal well-being, mental health, professional success, social relationships, academic performance, and so on, has been the focus of numerous research projects in the human and social sciences. Despite the abundance of studies on self-concept, however, there is some conceptual confusion, since researchers have used interchangeably the terms self-concept, self-image, self-esteem, self-acceptance, and even others. As far as distinguishing between the concepts of self-concept and self-esteem is concerned, the majority of authors associate the term self-concept with cognitive aspects of self-knowledge, using the self-esteem label for evaluative-affective aspects. «Concept of oneself» would be equivalent to self-knowledge, which would include all types of cognitive activity and content (concepts, percepts, images, judgements, reasoning, mnesic schemas, etc.). Judgements about oneself most likely constitute the cardinal organization of this entire system of self-knowledge. Two kinds of these judgements can be distinguished: descriptive and evaluative. Descriptive judgements refer to how we actually are, taking into consideration our age, sex, profession, physical characteristics, forms of behaviour, and so on. Evaluative judgements are concerned with appraisal of our characteristics, with what we think about them.

Self-esteem constitutes the evaluative part of self-concept, of self-knowledge.

The relationship between self-concept (descriptive) and self-esteem (evaluative) is of a hierarchical nature. Self-description contributes to positive self-appraisal which, in turn, protects the person's system. However, self-descriptive statements usually involve evaluative statements, since statements regarding ourselves always imply some degree of appraisal. Thus, since it is no easy task to separate the cognitive from the emotional aspect, the term self-concept is generally accepted in a broad sense that includes both aspects. Cardenal and Fierro (2003), who recently defined self-concept as a set of descriptive and evaluative statements about oneself, argue that self-concept represents the manner in which people represent, know and appraise themselves, pointing out that although the terms self-concept and self-esteem are often used interchangeably, self-esteem is – strictly speaking – the evaluative component within self-concept and self-knowledge.

Self-concept, self-esteem and psychopathological symptoms: gender and age differences

The results obtained in studies that have assessed gender differences in self-concept and self-esteem differ widely. In studies showing gender differences, women are found to have lower global self-concept (Wilgenbush & Merrel, 1999). However, other studies have failed to find any significant differences either in self-concept (Garaigordobil, Cruz, & Pérez, 2003) or self-esteem (Benjet & Hernández, 2001; Lameiras & Rodríguez, 2003; Matud, Ibáñez, Marrero, & Carballeira 2003). As regards psychopathological symptoms, in many studies women have major levels of psychopathological symptoms. In Spanish population, González de Rivera, De las Cuevas, Rodríguez Abuín and Rodríguez Pulido (2002) found in women higher punctuations in the dimensions of somatization, depression, anxiety and phobic anxiety, as well as in the General Symptomatic Index (GSI), in the Positive Symptom Total (PST), and in the Positive Symptom Distress Index (PSDI). Chabrol et al. (2004) found that self-esteem was significantly higher and depressive symptoms significantly lower among boys. Their results suggest that the differences in global self-esteem between boys and girls were linked to the greater frequency of girls with mild or moderate to severe depressive symptoms.

Self-esteem is one of the most widely studied variables in the behavioral sciences. Nevertheless, there are yet surprising gaps in our understanding of the way it develops across the life span. Some studies confirm that self-esteem levels were high in childhood, dropped during adolescence, rose gradually throughout adulthood, and declined sharply in old age. Self-esteem showed substantial continuity over time, comparable to the stability found for personality traits. Self-esteem stability was low during childhood, increased throughout adolescence and young adulthood, and declined during midlife and old age (Robins, Trzesniewski, Tracy, Gosling, & Potter, 2002; Trzesniewski, Donnellan, & Robins, 2003). Trzesniewski (2004) studied individuals aged 25 to 96 which were followed longitudinally for eight years. The study results were: 1) Self-esteem showed substantial continuity over time; the average test-retest correlation was .43 and the average disattenuated test-retest correlation was .73; Self-esteem stability decreased during old age; this trend could not be explained by age differences in scale reliability. The level of stability did not vary by gender, ethnicity, or socioeconomic status; 2) A curvilinear trend was found, such that mean self-esteem levels increased from early to middle adulthood and then decreased from middle adulthood to old age. This curvilinear trend held across gender, ethnicity, socioeconomic status, and cohort; 3) Having positive relationship experiences led to higher self-esteem at all ages, but did not prevent the decline in self-esteem during old age; and 4) Individuals with higher self-esteem had higher parental satisfaction, remained more socially involved across the life span, and were buffered against the normative decline in marital satisfaction. The results showed that self-esteem is a meaningful and well differentiated psychological construct.

Relationships between self-concept/self-esteem and psychopathological symptoms

Studies that have analyzed the links between self-concept/self-esteem and psychopathological symptoms, both in children and adolescents and in adults, indicate inverse relationships between these constructs. Positive relationships have been reported between self-esteem and mental health (Yuang, 2000), and between self-concept and mental health (Fan & Fu, 2001). There have been also found relationships among self-concept dimensions and some health-promoting behaviours and health-risk behaviours (Pastor, Balaguer, & García-Merita, 2006). From an experimental perspective, Gutiérrez, Luciano and Valdivia (2005) showed that high rigidity scorers maintained original high self-efficacy. In complementary fashion, other study has found low self-esteem to be a strong predictor of personality disorders (Watson, 1998).

Psychosomatic problems: In a study by Varni, Rapoff, Waldron and Gragg (1996), participants with higher perception of the intensity of pain presented more anxious-depressive symptoms and low self-esteem. The work by Garrick, Ostrov and Offer (1988) suggested that subjects with normal self-concept were significantly free of physical symptoms, while Dowd (2002) found an inverse relationship between self-concept and somatic symptoms in adolescents.

Obsession-Compulsion: Some research has reported inverse correlations between self-concept and compulsion (Fan & Fu, 2001), as well as inverse correlations between obsessive-compulsive tendencies and, on the one hand, self-esteem (Biby, 1998), and on the other, body esteem or body image (Bohne, Keuthen, Wilhelm, Deckersbach, & Jenike, 2002), with low self-esteem identified as a strong predictor of obsessive-compulsive personality disorders (Watson, 1998).

Interpersonal sensitivity: Various studies have detected a negative relationship between self-concept/self-esteem and interpersonal sensitivity (Fan & Fu, 2001; Kim, 2003; McCabe, Blankstein, & Mills, 1999). Jackson and Cochran (1991) have considered interpersonal sensitivity equivalent to low self-esteem, and interpersonal sensitivity has even been identified as a significant predictor of self-esteem (McCabe et al., 1999).

Depression: Various studies report negative correlations between self-concept/self-esteem and depression (Alfeld & Sigelman, 1998; Fan & Fu, 200; Hoffmann, Baldwin, & Cerbone, 2003; Kim, 2003; Valentine, 2001; Whitley & Gridley, 1993). Other research indicates that high self-esteem is a protective factor against depressive symptoms (Takakura & Sakihara, 2001), whilst low self-esteem is a predictive factor for depression (Dowd, 2002; Braithwaite, 2004) and suicidal ideation (Jin & Zhang, 1998; Plutchik, Botsis, & Van Praag, 1995). Physical self-concept has also correlated negatively with depression in some studies (Bohne et al., 2002; Erkolahti, Ilonen, Saarijarvi, & Terho, 2003).

Anxiety: Some studies have indicated inverse relationships between self-esteem and anxiety, suggesting that adolescents with high self-esteem show low levels of state-trait anxiety (Fickova, 1999; Garaigordobil et al., 2003; Newbegin & Owens, 1996; Yang, 2002). Anxiety has been regarded as a predictive factor of low self-concept (Dowd, 2002), and Bohne et al. (2002) found an inverse correlation between body esteem and anxiety.

Hostility: Research data suggest that adolescents with high positive self-concept and high self-concept/self-esteem present few antisocial behaviours (Calvo, González, & Martorell, 2001). Likewise, it has been shown that adolescents with low self-esteem present more threatening and intimidatory behaviours towards others (O'Moore & Kirkham, 2001; Rigby & Slee, 1993). In their study of aggressive behaviour, Marsh, Parada, Yeung and Healey (2001) explored the characteristics of aggressive subjects (who are seen as troublemakers, who get into fights, and who are usually punished for this reason), confirming that they have low self-concept. A recent cross-cultural study (Esteve, Merino, Rius, Cantos, & Ruiz, 2003) also found positive relationships between internal dimensions of self-concept and aggressive behaviour. In this line, the work of Crocker and Luhtanen (2003) supports the notion of low self-esteem as a predictor of social problems.

Paranoia ideation and psychoticism: Some studies have found a positive relationship between paranoia ideation and low self-esteem (Ellett, Lopes, & Chadwick, 2003; Martín & Penn, 2001), while others have found negative associations between self-concept and psychoticism (Fan & Fu, 2001; Heaven, 1991).

Study objectives and hypotheses

The study has two objectives: 1) to explore the characteristics of self-concept, self-esteem and psychopathological symptoms, according to age and gender, in a representative sample from the Basque Country aged 12 to 65; and 2) to study the relationships of self-concept and self-esteem to psychopathological symptoms (somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, melancholic depression). Taking the above-cited studies as a starting point, in the present work we propose four hypotheses: 1) There will be significant differences in self-concept, self-esteem and psychopathological symptoms according to age; 2) There will be no statistically significant differences in self-concept and self-esteem according to gender, that is, males and females will have similar levels of self-concept and self-esteem; 3) There will be differences in psychopathological symptoms according to gender, with higher scores in females; and 4) There will be significant inverse relationships between self-concept/self-esteem and psychopathology, so that people with high levels of self-concept and self-esteem will present few psychopathological symptoms.

Method

Participants

The sample was made up of 1579 participants aged 12 to 65 from the three provinces of the Basque Country. Selection was random, from the census records of the three provincial capitals: Bilbao, San Sebastián and Vitoria. Participants were identified and evaluated at their homes. Taking into account different categories, such as population of each city, sex, educational level and occupation, we used a simple random sampling procedure, eliminating those who at the time were receiving psychological treatment for a mental disorder. In selecting the participants we tried to include similar numbers of males and females, and as broad a cross-section as possible of educational levels and occupations. In the total sample, 732 participants were males (46.4%) and 847 were females (53.6%), and diverse levels of education are represented: no education, primary, secondary, high school and university. As regards occupation, the sample includes: students, manual workers, professionals, homemakers (housewives) and pensioners. In order to carry out an analysis according to age, after obtaining the measures for each age, and taking the results obtained as a reference, the sample was divided into 16 age groups: from 12 to 29 in ranges of 2 years, and from 30 to 65 in ranges of 5 years. There was a 3% rate of abandonment (*n*= 47).

Design and procedure

The study carried out used a descriptive and correlational methodology. During the years 2003 and 2004 we administered to the sample a battery made up of three assessment instruments: the Self-Esteem Scale (SES, Rosenberg, 1965), the Adjective Checklist for Self-Concept Assessment with Adolescents and Adults (*LAEA,* Garaigordobil, in press), and the Symptom Checklist Revised (SCL-90-R, Derogatis, 2002). The battery was applied and scored by qualified psychologists and psychology students trained for this purpose. The instruments were applied over two sessions.

Assessment instruments

With the aim of measuring the dependent variables, we applied 3 assessment instruments with adequate psychometric guarantees of reliability and validity. The questionnaires implementation lasted between 45 and 60 minutes depending on the age of the subjects.

SES. *Self-Esteem Scale* (Rosenberg, 1965). This scale assesses general self-esteem with 10 statements focusing on global feelings of self-appraisal. The respondent must read the statements and report the extent to which they apply to him/her, using a Likert-type scale with 4 response categories (ranging from *strongly agree to strongly disagree*). The reliability of the test has been broadly documented in the literature. McCarthy and Hoge (1982) reported consistency coefficients (Cronbach's alpha) ranging from .74 to .77, and test-retest reliability of .63 (interval of 7 months) and .85 (interval of two weeks). Validity of the scale as a one-dimensional measure of self-esteem has also been confirmed in several studies (Rosenberg, 1965; Silber & Tippett, 1965). Reliability analysis with the sample of this study (*M*= 31.55, *SD*= 4.51) evidenced satisfactory internal consistency (Cronbach's alpha= .80).

LAEA. *Adjective Checklist for Self-Concept Assessment with Adolescents and Adults* (Garaigordobil, in press). This checklist is made up of 57 positive adjectives which respondents are asked to score on a scale of 0-4 (*not at all – very well*) according to the degree to which they define or describe their personality. A study carried out with a sample of 634 people obtained a Cronbach's alpha of .92 and a Spearman-Brown coefficient of .83. Test-retest reliability obtained with a sample of 142 university students and an interval of 40 days was high (*r*= .83, *p*<.001), indicating temporal stability of

the instrument. In order to analyze the validity of the LAEA, we calculated correlations with other instruments measuring self-concept (AF-5) and self-esteem (SES), obtaining significant positive correlations between the LAEA and the AF-5 (r= .71, p<.001) and with the SES (r= .63, p<.001), which indicate acceptable construct or concurrent validity. Furthermore, studies of the convergent and discriminant validity of the LAEA carried out with a sample of 322 adolescents aged 14 to 16 indicate significant (p<.001) negative relationships of self-concept with psychopathological symptoms, with parent-assessed behaviour problems, and with negative social skills. Likewise, positive relationships were confirmed with cooperativeness, with appropriate social skills, with parent-assessed social adjustment, with self-esteem, with feelings of happiness and with personality traits such as: emotional stability, mental openness, sociability and responsibility. Reliability analysis with the sample of this study (M= 159.12, SD= 22.92) evidenced high internal consistency (Cronbach's alpha= .92).

SCL-90-R. Symptoms Checklist - 90 - Revised (Derogatis, 2002). This self-report has 90 items distributed in 10 scales referring to psychopathological disorders: *somatization*, *obsession-compulsion, interpersonal sensitivity, depression*, *anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism* and *additional scale* (melancholic depression). With the scores of the 10 scales a total score is obtained: «*Psychopathological symptoms total*». Furthermore, the instrument permits the calculation of the *General Symptomatic Index* (GSI), which is a standard and indiscriminate measure of the intensity of global mental and psychosomatic suffering, the *Positive Symptom Total* (PST), which is the number of symptoms present, and the *Positive Symptom Distress Index* (PSDI), which relates global suffering or distress to number of symptoms. The results of studies conducted with Spanish samples (González de Rivera et al., 2002) suggest good reliability of the instrument, being consistent with those carried out by the author. Alpha coefficient values range from .81 to .90. Temporal stability (between .78 and .90) with a test-retest interval of one week shows stability of scores. Other studies that have strengthened claims to the instrument's validity are those that show the relationship between the profile of symptomatic dimensions and the diagnostic group to which the clinical sample belongs. Thus, for example, scores are significantly higher in psychiatric samples than in non-clinical samples. The author's original studies with American samples show the construct validity (Derogatis & Cleary, 1977) and the convergent validity, given the high correlations of symptomatic dimensions with MMPI in psychiatric patients (Derogatis, Rickels, & Rock, 1976). Reliability analysis with the sample of this study (M= 58.95, SD= 40.63) evidenced high internal consistency (Cronbach's alpha= .90).

Results

Self-concept, self-esteem and psychopathological symptoms: differences according to age

First of all, we calculated the means and standard deviations for the variables self-concept, self-esteem and psychopathological symptoms in the 16 age groups in which the sample was distributed (see table 1). The variance analysis obtained indicates significant differences associated with age in self-concept, F (1, 15)= 2.39, p<.001, in self-esteem, F (1, 15)= 2.95, p<.001, and in quantity of psychopathological symptoms, F (1, 15)= 3.99, p<.001. Taking into account these differences, the analyses were carried out in different ways for the different age groups.

In the variable self-concept (see table 1) we observed an increase in score with increasing age up to age 44, from which

Table 1
Means and standard deviations in self-concept, self-esteem and psychopathological symptoms in different age ranges

Age ranges	LAEA self-concept			SES self-esteem			SCL-90-R psychopathological symptoms total		
	N	M	SD	N	M	SD	N	M	SD
12-13	58	146.89	21.98	74	31.61	4.22	74	45.93	43.62
14-15	67	147.46	25.39	79	31.47	4.76	78	54.41	42.40
16-17	79	147.82	18.00	84	31.49	5.10	84	57.67	43.41
18-19	201	147.28	20.97	217	30.23	4.62	217	69.81	43.02
20-21	125	148.77	22.62	136	30.73	4.52	136	67.31	41.87
22-23	100	147.08	23.01	109	31.40	4.63	109	62.93	39.32
24-25	63	150.84	21.42	73	32.36	4.37	73	65.53	44.06
26-27	37	152.62	23.11	40	32.45	5.01	40	50.45	28.48
28-29	41	151.36	23.17	45	32.82	3.60	45	44.88	34.23
30-34	117	155.28	20.54	125	32.79	4.00	125	50.60	34.68
35-39	95	152.27	24.60	104	31.71	5.20	105	53.81	39.12
40-44	94	157.92	23.32	101	32.23	4.28	101	57.28	36.69
45-49	128	156.39	22.68	145	31.46	4.15	145	59.83	41.38
50-54	107	152.81	24.48	123	31.72	4.83	123	49.03	33.34
55-59	69	151.76	23.14	79	31.51	3.19	79	64.20	42.17
60-65	42	152.16	30.47	44	32.07	3.97	44	68.54	44.06
Total	1423	151.12	22.92	1578	31.55	4.51	1578	58.95	40.63

point there was a progressive decrease. Top score for this variable was 228 points, and mean score for the sample as a whole was 151.12. It should be pointed out that participants who failed to give a score to one or more of the 57 adjectives were eliminated from the analysis, and that sample mortality in this instrument was 156. In self-esteem (see table 1) this tendency is not observed, since there are cyclical variations in the different age groups, with means for the different age levels ranging from 30.23 to 32.82 points. Top score for this variable was 40 points, and mean for the whole sample, 31.55 points. As regards psychopathological symptoms (see table 1), the data show a relevant increase in symptoms at age 18, with a peak score in the age range 18-19 years (*M*= 69.81). Subsequently, the mean score falls slightly, though the highest scores are found in the next age ranges, that is, 20-21 years (*M*= 67.31), 22-23 years (*M*= 62.93) and 24-25 years (*M*= 65.53). After that, there is a decrease in quantity of psychopathological symptoms until age 55, when there is a substantial increase from 55 to 59 years (*M*= 64.20). This tendency continues in the following and final age range, 60-65 years (*M*= 68.54), in which the mean score, very high, comes quite close to that found at age 18. Top score for this variable is 360 points, and mean for the sample as a whole, 58.95 points.

Self-concept, self-esteem and psychopathological symptoms: Differences according to gender

With the aim of determining whether there are significant differences in the variables self-concept, self-esteem and psychopathological symptoms according to gender in the 16 age groups in which the sample was divided, we carried out a variance analysis, the results of which are shown in tables 2, 3, and 4, respectively.

As can be seen in table 2, the results indicate that there are no differences in self-concept due to gender, since males and females obtain similar means in the different age groups, and the results of the variance analysis do not show significant differences in any of the age ranges, nor in the sample as a whole. In the variable self-esteem (see table 3), significant differences are only found in the age group 16-17, with higher scores in males (*M*= 33.17) than in females (*M*= 29.95) and in the age group 40-44, with higher scores in males (*M*= 33.24) than in females (*M*= 31.41). Similarly, the results of the variance analysis indicate differences for the total sample, with slightly higher scores in males (*M* = 31.94) than in females (*M*= 31.21). In the rest of the age groups no statistically significant differences were found according to gender. As regards differences according to gender for the different psychopathological symptoms (see table 4), significant differences were found between males and females in the total set of psychopathological symptoms assessed, $F\ (1, 1576)= 11.90$, $p<.001$, and in many of the particular symptoms considered, such as those of somatization, $F\ (1, 1576)= 21.10$, $p<.001$, interpersonal sensitivity, $F\ (1, 1576)= 17.84$, $p<.001$, depression, $F\ (1, 1576)= 27.90$, $p<.001$, anxiety, $F\ (1, 1576)= 13.37$, $p<.001$, phobic anxiety, $F\ (1, 1576)= 15.45$, $p<.001$, paranoid ideation, $F\ (1, 1576)= 7.92$, $p<.01$, and psychopathological symptoms total, $F\ (1, 1576)= 11.90$, $p<.001$, as well as in the General Symptomatic Index, $F\ (1, 1576)= 11.90$, $p<.001$, and the Positive Symptom Total, $F\ (1, 1576)= 8.41$, $p<.01$. As far as the direction of these differences is concerned, with the exception of the paranoid ideation symptoms, in which males (*M*= 4.84) score slightly higher than females (*M*= 4.33), in the rest of the symptoms females present significantly higher scores, that is, they have more psychopathological symptoms of somatization (males *M*= 8.66,

		Table 2					
		Means, standard deviations and variance analysis of self-concept according to gender					
	LAEA self-concept Males			LAEA self-concept Females			Anova F (1, 1421)
Age ranges	N	M	SD	N	M	SD	
12-13	26	151.57	22.51	32	143.09	21.13	2.18
14-15	38	143.65	26.91	29	152.44	22.73	2.00
16-17	38	146.92	17.16	41	148.65	18.92	.18
18-19	60	147.83	21.158	141	147.05	20.97	.05
20-21	57	149.26	23.30	68	148.36	22.19	.04
22-23	53	148.01	23.88	47	146.02	22.19	.18
24-25	29	149.96	20.40	34	151.58	22.53	.08
26-27	21	150.14	26.20	16	155.87	18.62	.55
28-29	18	155.66	25.91	23	148.00	20.74	1.10
30-34	60	155.40	22.35	57	155.15	18.64	.00
35-39	45	152.00	28.28	50	152.52	21.05	.01
40-44	43	155.88	23.73	51	159.64	23.06	.60
45-49	65	156.01	20.25	63	156.79	25.11	.03
50-54	53	150.47	28.00	54	155.11	20.46	.96
55-59	40	150.15	23.89	29	154.00	22.30	.46
60-65	21	149.14	25.44	21	155.19	35.17	.40
Total	667	150.87	23.65	756	151.35	22.26	.15

* *p*<.05; ** *p*<.01; *** *p*<.001

females M= 10.27), interpersonal sensitivity (males M= 6.93, females M= 8.23), depression (males M= 8.23, females M= 10.42), anxiety (males M= 4.75, females M= 5.83), and phobic anxiety (males M= 1.33, females M= 1.83), and psychopathological symptoms total (males M= 55.16, females M= 62.22).

Relationships between self-concept, self-esteem and psychopathological symptoms

With the scores obtained in the LAEA, the SES and the SCL-90-R, and after checking the basic assumptions, we calculated the Pearson correlation coefficients so as to analyze the relationships

Table 3
Means, standard deviations and variance analysis of self-esteem according to gender

Age ranges	SES self-esteem Males			SES self-esteem Females			Anova F (1, 1576)
	N	M	SD	N	M	SD	
12-13	30	32.30	3.85	44	31.14	4.43	1.36
14-15	46	31.72	4.80	33	31.12	4.74	.29
16-17	40	33.17	4.59	44	29.95	5.10	9.16**
18-19	65	30.68	4.55	152	30.03	4.65	.88
20-21	59	31.05	4.65	77	30.48	4.42	.53
22-23	58	31.21	4.48	51	31.63	4.83	.22
24-25	36	32.06	4.07	37	32.65	4.68	.33
26-27	22	32.18	5.63	18	32.78	4.26	.13
28-29	20	33.45	3.44	25	32.32	3.72	1.09
30-34	64	32.89	4.14	61	32.69	3.89	.07
35-39	47	32.13	5.60	57	31.37	4.80	.54
40-44	45	33.24	4.08	56	31.41	4.31	4.7*
45-49	73	31.77	4.06	72	31.15	4.25	.79
50-54	58	31.60	4.7	65	31.80	4.90	.06
55-59	48	31.48	3.12	31	31.55	3.55	.00
60-65	21	32.62	3.60	23	31.57	4.30	.76
Total	732	31.94	4.43	846	31.21	4.56	10.36***

* p<.05; ** p<.01; *** p<.001

Table 4
Means, standard deviations and variance analysis of psychopathological according to gender

SCL-90-R Psychopathological symptoms	Males & Females (n= 1578)		Males (n= 731)		Females (n= 847)		Anova F (1, 1576)
	M	SD	M	SD	M	SD	
Somatization	9.52	6.97	8.66	6.65	10.27	7.15	21.10***
Obsession-compulsion	8.79	6.41	8.47	6.30	9.07	6.50	3.50 +
Interpersonal sensitivity	7.63	6.14	6.93	5.64	8.23	6.48	17.84***
Depression	9.41	8.26	8.23	7.53	10.42	8.73	27.90***
Anxiety	5.33	3.63	4.75	5.31	5.83	6.36	13.37***
Hostility	3.63	3.83	3. 82	3.91	3.47	3.75	3.26 +
Phobic anxiety	1.59	2.61	1.31	2.52	1.83	2.67	15.45***
Paranoid ideation	4.57	3.64	4.84	3.86	4.33	3.42	7.92**
Psychoticism	3.13	4.03	3.03	3.98	3.22	4.08	.83
Additional (melancholic depression)	5.31	4.48	5.08	4.35	5.50	4.58	3.54 +
Psychopathological symptoms total	58.95	40.63	55.16	38.26	62.22	42.32	11.90***
GSI General Symptomatic Index	.65	.45	.61	.42	.69	.47	11.90***
PST Positive Symptom Total	36.86	18.64	35.40	18.75	38.12	18.45	8.41**
PSDI Positive Symptom Distress Index	1.53	.70	1.52	.90	1.55	.46	.50

* p<.05; ** p<.01; *** p<.001

of self-concept and self-esteem to diverse psychopathological symptoms. The results are shown in table 5.

As can be seen in table 5, the results show significant negative correlations for self-concept and self-esteem with all the psychopathological symptoms in both sexes. For the sample as a whole ($n= 1423$), self-concept is found to be related ($p<.001$) to somatization, r (1423)= -.10, obsession-compulsion, r (1423)= -.24, interpersonal sensitivity, r (1423)= -.28, depression, r (1423)= -.23, anxiety, r (1423)= -.15, hostility, r (1423)= -.21, phobic anxiety, r (1423)= -.14, paranoid ideation, r (1423)= -.11, and psychoticism, r (1423)= -.20, to the additional scale associated with melancholic depression, r (1423)= -.16, to the psychopathological symptoms total, r (1423)= -.25, to the General Symptomatic Index, r (1423)= -.25, and to Positive Symptom Total, r (1423)= -.28. The only aspect in which a significant relationship with self-concept is not found (either for the sample as a whole or for either of the sexes) is the Positive Symptom Distress Index.

As far as self-esteem is concerned (see table 5) the results are along the same lines, that is, we found significant negative correlations – indeed even stronger than in the case of self-concept – with all the psychopathological symptoms measured, both for the total sample and for each gender. Specifically, inverse relationships were confirmed ($p<.001$) between self-esteem and somatization, r (1578)= -.20, obsession-compulsion, r (1578)= -.33, interpersonal sensitivity, r (1578)= -.40, depression, r (1578)= -.40, anxiety, r (1578)= -.23, hostility, r (1578)= -.19, phobic anxiety, r (1578)= -.19, paranoia ideation, r (1578)= -.22, and psychoticism, r (1578)= -.27, as well as the additional scale associated with melancholic depression, r (1578)= -.26, the psychopathological symptoms total, r (1578)= -.37, the General Symptomatic Index, r (1578)= -.37, Positive Symptom Total, r (1578)= -.35, $p<.001$, and the Positive Symptom Distress Index r (1578)= -.12; though this last-mentioned correlation was only

confirmed for the sample as a whole and the subsample of females.

Complementary, in order to explore the variables which predict good self-esteem and good global self-concept, i.e., high scores in these criterion variables, a multiple linear regression analysis was carried out, step by step. Out of the group of predictive variables of *self-esteem*, six turned out to be statistically significant: interpersonal sensitivity (Beta= -.226), depression (Beta= -.275), anxiety (Beta= -.164), obsession-compulsion (Beta= -.077), paranoid ideation (Beta= -.076), and positive symptom total (PST) (Beta= -.090). Few psychopathological symptoms (interpersonal sensitivity, depression, anxiety, obsession-compulsion, paranoid ideation, positive symptom total) were predictive variables of the self-esteem criterion variable, showing a low explanatory power, given that these predictive variables explain 20.2 % of the variance. From the group of predictive variables of *global self-concept*, six turned out to be statistically significant: positive symptom total (PST) (Beta= -.327), interpersonal sensitivity (Beta= -.194), paranoid ideation (Beta= -.183), somatization (Beta= -.102), hostility (Beta= -.133), and anxiety (Beta= -.116). Few psychopathological symptoms (positive symptom total, interpersonal sensitivity, paranoid ideation, somatization, hostility, and anxiety) were predictive variables of the global self-concept criterion variable, presenting a low explanatory power, given that these predictive variables explain 12.3 % of the variance. In both cases the positive symptom total was a significant predictive variable.

Discussion

First of all, the descriptive analyses carried out indicate significant differences according to age in all the variables, in self-concept, in self-esteem and in quantity of psychopathological symptoms. In self-concept, we observed an increase in score up to age 44, after which there was a gradual decrease. This decline

Table 5
Pearson correlation coefficients between self-concept, self-esteem and psychopathological symptoms for the total sample and for the sample according to gender

SCL-90-R Psychopathological symptoms	LAEA Self-concept ($n= 1423$)			SES Self-esteem ($n= 1578$)		
	Males & Females	Males	Females	Males & Females	Males	Females
Somatization	-.10***	-.09*	-.12**	-.20***	-.12**	-.24***
Obsession-compulsion	-.24***	-.24***	-.25***	-.33***	-.26***	-.39***
Interpersonal sensitivity	-.28***	-.25***	-.30***	-.40***	-.34***	-.44***
Depression	-.23***	-.23***	-.24***	-.40***	-.33***	-.44***
Anxiety	-.15***	-.18***	-.12**	-.23***	-.19***	-.25***
Hostility	-.21***	-.22***	-.20***	-.19***	-.12**	-.27***
Phobic anxiety	-.14***	-.18***	-.12**	-.19***	-.17***	-.19***
Paranoid ideation	-.11***	-.11**	-.11**	-.22***	-.18***	-.27***
Psychoticism	-.20***	-.22***	-.19***	-.27***	-.22***	-.31***
Additional (melancholic depression)	-.16***	-.17***	-.15***	-.26***	-.22***	-.29***
Psychopathological symptoms total	-.25***	-.25***	-.24***	-.37***	-.30***	-.42***
GSI General Symptomatic Index	-.25***	-.25***	-.24***	-.37***	-.30***	-.42***
PST Positive Symptom Total	-.28***	-.26***	-.30***	-.35***	-.29***	-.40***
PSDI Positive Symptom Distress Index	-.03	-.02	-.05	-.12***	-.06	-.25***

* $p<.05$; ** $p<.01$; *** $p<.001$

from age 45 onwards may be explained by the characteristics of this point in development, given that, although the person tends to be still performing at a high level in the professional context, and is generally well adjusted professionally, socially and with the family, it is nevertheless from around this age that there begins a stage of crisis, with a relative decline that progressively affects aspects of life such as health, job performance, and so on. In self-esteem we do not observe the same tendency of increase followed by decrease, as there are cyclical variations in the different age ranges, without strong increases or reductions at different age levels. As regards psychopathological symptoms, the data indicate a relevant increase in symptoms at age 18, with a peak score in the range 18-19 years. After that, the mean score descends slightly, though the highest scores are found in the immediately subsequent age groups, that is, from age 20 to age 25. From then on there is a decrease in the quantity of psychopathological symptoms up to age 55, when they show a substantial increase that continues until age 60-65, an age range in which mean score is very high – almost reaching the levels found at age 18. It may be that the increases observed between the ages of 18 and 25 are associated with the tension and uncertainty characteristic of this stage of life, in which the human being is structuring his or her personal and professional future. The increases found around age 60 may be related to the onset of a relevant process of decline, since health difficulties and psychosocial problems (loss of loved ones, etc.) tend to be frequent, and human beings are faced with old age, a stage that brings them close to the end of the life cycle. The results obtained permit us to ratify the first hypothesis that postulated the existence of differences in self-concept, self-esteem and psychopathological symptoms in accordance with age. Some results point in the same direction as those of other studies that also found a curvilinear trend, such that mean self-esteem/self-concept levels increased from early to middle adulthood and then decreased from middle adulthood to old age (Robins et al., 2002; Trzesniewski et al., 2003; Trzesniewski, 2004).

Secondly, the results indicate that there are no differences in self-concept due to gender, since males and females obtain similar means in the different age groups. In self-esteem, the same tendency is observed, given that, with the exception of the differences found in the age range 16-17 years and in the age range 40-44, scores in males and females show no statistically significant differences. These data confirm hypothesis 2, which postulated that there would be no differences between males and females in self-concept and self-esteem. Moreover, these results point in the same direction as those of other studies that also found no significant differences in either self-concept (Garaigordobil et al., 2003) or self-esteem (Benjet & Hérnandez, 2001; Lameiras & Rodríguez, 2003; Matud et al., 2003), while contradicting those of other work that found females to have lower global self-concept (Wilgenbush & Merrel, 1999). The discrepancies between these results may perhaps be explained by differences in the age ranges of the samples and in the assessments instruments employed.

Thirdly, the data ratify hypothesis 3, given that they show significant differences between males and females in total quantity of psychopathological symptoms. More specifically, and in relation to the direction of these differences, we can conclude that, with the exception of paranoid ideation symptoms, in which males score more highly than females, in the rest of the symptoms the females present higher scores, that is, they have more psychopathological symptoms of somatization, interpersonal

sensitivity, depression, anxiety and phobic anxiety. These results may be partially explained by females' tendency to interiorize worries, which may become transformed into anxious-depressive and psychosomatic symptoms. These results follow the same trend of the studies that found that women show more psychopathological symptoms (Chabrol et al., 2004; González de Rivera et al., 2002).

Fourthly, the results of the correlational analyses confirm the existence of significant inverse relationships between self-concept/self-esteem and the total set of psychopathological symptoms, and specifically all the psychopathological symptoms assessed (somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, melancholic depression). These results confirm hypothesis 4, which postulated that people with high self-concept and self-esteem would have few psychopathological symptoms. Furthermore, these results are in the same direction as those of other studies indicating inverse relationships between self-concept/self-esteem and psychopathological disorders (Fan & Fu, 2001; Watson, 1998; Yuang, 2000), and permit us to suggest that self-concept and self-esteem may be indicators of mental health.

The results of the present study also ratify those of other research that has found inverse relationships between self-concept/self-esteem and psychosomatic symptoms (Dowd, 2002; Garrick et al., 1988; Varni et al., 1996), obsessive-compulsive symptoms (Biby, 1998; Bohne et al., 2002; Watson, 1998), interpersonal sensitivity (Fan & Fu, 2001; Jackson & Cochran, 1991; Kim, 2003; McCabe et al., 1999), depression (Alfeld & Sigelman, 1998; Fan & Fu, 2001; Jones, 2003; Hoffmann et al., 2003; Kim, 2003; Plutchik et al., 1995; Valentine, 2001), anxiety (Dowd, 2002; Bohne et al., 2002; Fickova, 1999; Garaigordobil et al., 2003; Newbegin & Owens, 1996; Yang, 2002), hostility (Crocker & Luhtanen, 2003; Esteve et al., 2003; O'Moore & Kirkham, 2001; Marsh et al., 2001; Rigby & Slee, 1993), paranoid ideation (Ellett et al., 2003; Martín & Penn, 2001), and psychoticism (Fan & Fu, 2001; Heaven, 1991). It should nevertheless be stressed that some correlations are rather low, though still worthy of consideration, given the sample size.

The results of the present research have permitted us to identify the association between self-concept/self-esteem and psychopathological symptoms. Consequently, they have implications in the context of prevention, and suggest that intervention programmes which promote self-concept and self-esteem, in children, adolescents and adults, may prevent the development of psychopathological problems. Clearly, as can be seen in some studies (Alonso & Román, 2005) there are many factors (biological, psychological, family, interpersonal, etc.) to be taken into account in the prevention and treatment of these types of problem, but our findings support the evidence that high self-concept/self-esteem may favourably modulate the negative impact of many of these variables. As a limitation of the study, it should be underlined that, given the correlational nature of the data, they make little contribution as to the causal relationships that may exist between these variables, and this suggests the need for analysis of these constructs with an experimental research methodology.

<div align="center">Gratefulness</div>

References

Alonso, G., & Román, J.M. (2005). Prácticas educativas familiares y autoestima. *Psicothema, 17*(1), 76-82.

Alfeld, L.C., & Sigelman, C.K. (1998). Sex differences in self-concept and symptoms of depression during the transition to college. *Journal of Youth and Adolescence*, 27, 219-244.

Benjet, C., & Hernández Guzmán, L. (2001). Gender differences in psychological well-being of Mexican early adolescents. *Adolescence, 36*(141), 47-65.

Biby, E.L. (1998). The relation between body dysmorphic disorder and depression, self-esteem, somatization and obsessive-compulsive disorder. *Journal of Clinical Psychology, 54*, 489-499.

Bohne, A., Keuthen, N.J., Wilhelm, S., Deckersback, T., & Jenike, M.A. (2002). Prevalence of symptoms of body dysmorphic disorder and its correlates: A cross-cultural comparison. *Psychosomatics: Journal of Consultation Liasion Psychiatry*, 43 486-490.

Braithwaite, K. (2004). Predictors of depressive symptomatology among black college women. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 64* (12-B), 6322.

Cardenal, V., & Fierro, A. (2003). Componentes y correlatos del autoconcepto en la escala de Piers-Harris. *Estudios de Psicología, 24*, 101-111.

Calvo, A.J., González, R., & Martorell, M.C. (2001). Variables relacionadas con la conducta prosocial en la infancia y adolescencia: personalidad, autoconcepto y género. *Infancia y Aprendizaje, 24*, 95-111.

Chabrol, H., Carlin, E., Michaud, C., Rey, A., Cassan, D., Juillot, M., et al. (2004). Etude de l'echelle d'estime de soi de Rosenberg dans un echantillon de lyceens. *Neuropsychiatrie de l'Enfance et de l'Adolescence, 52*(8), 533-536.

Crocker, J., & Luhtanen, R.K. (2003). Level of self-esteem and contingencies of self-worth: Unique effects on academic, social and financial problems in college students. *Personality and Social Psychology Bulletin, 29*, 701-712.

Derogatis, L.R. (2002). *SCL-90-R. Cuestionario de 90 síntomas revisado*. Madrid: TEA (original work published in 1983).

Derogatis, L.R., & Cleary (1977). Confirmation of the Dimensional Structure of the SCL-90: A study in construct validation. *Journal of Clinical Psychology, 33*, 981-989.

Derogatis, L.R., Rickels, K., & Rock, A.F. (1976). The SCL-90 and the MMPI: A step in the validation of a new self-report scale. *British Journal of Psychiatry, 128*, 280-289.

Dowd, S.A. (2002). Internalizing symptoms in adolescents: Assessment and relationship to self-concept. *Dissertation Abstract International Section B: The Sciences and Engineering*, 62 (8-B), 3796.

Ellett, L., Lopes, B., & Chadwick, P. (2003). Paranoia in a nonclinical population of college students. *Journal of Nervous and Mental Disease, 191*, 425-430.

Erkolahti, R., Ilonen, T., Saarijarvi, S., & Terho, P. (2003). Self-image and depressive symptoms among adolescents in a non-clinical sample. *Nordic Journal of Psychiatry, 57*, 447-451.

Esteve, J.M. Merino, D., Rius, F., Cantos, B., & Ruiz, C. (2003). Autoconcepto y respuestas agresivas en un contexto de la educación intercultural. *Revista de Educación, 332,* 357-381.

Fan, F., & Fu, J. (2001). Self-concept and mental health of college students. *Chinese Mental Health Journal, 15*, 76-77.

Fickova, E. (1999). Personality dimensions and self-esteem indicators relationships. *Studia Psychologica, 41*, 323-328.

Garaigordobil, M., Cruz, S., & Pérez, J.I. (2003). Análisis correlacional y predictivo del autoconcepto con otros factores conductuales, cognitivos y emocionales de la personalidad durante la adolescencia. *Estudios de Psicología, 24*, 113-134.

Garaigordobil, M. (in press). LAEA. *Listado de adjetivos para la evaluación del autoconcepto en adolescentes y adultos*. Madrid: Pirámide.

Garrick, T., Ostrov, E., & Offer, D. (1988). Physical symptoms and self-image in a group of normal adolescents. *Psychosomatics, 29*, 73-80.

González de Rivera, J.L., De las Cuevas, C., Rodríguez Abuín, M., & Rodríguez Pulido, F. (2002). *SCL-90-R, Symptom Cheklist 90 Revised, Spanish adaptation*. Madrid: TEA.

Gutiérrez, O., Luciano, M.C., & Valdivia, S. (2005). Change of self-efficacy verbalizations and derivation of functions. *Psicothema, 17*(4), 614-619.

Heaven, P.C. (1991). Personality correlates of functional and dysfunctional impulsiveness. *Personality and Individual Differences, 12*(11), 1213-1217.

Hoffmann, J.P., Baldwin, S.A., & Cerbone, F.G. (2003). Onset of major depressive disorder among adolescent. *Journal of the American Academy of Child and Adolescent Psychiatry, 42,* 217-224.

Jackson, J., & Cochran, S.D. (1991). Loneliness and psychological distress. *Journal of Psychology, 125*, 257-262.

Jin, S., & Zhang, J. (1998). The effects of physical and psychological well-being on suicidal ideation. *Journal of Clinical Psychology, 54*, 401-413.

Jones, C. (2003). The congruence of self- and peer-rated social competence as related to depression and other peer social functioning. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 64* (6-B), 2958.

Kim, Y.H. (2003). Correlation of mental health problems with psychological constructs in adolescence: Final results from a 2-year study. *International Journal of Nursing Studies, 40*, 115-124.

Lameiras, M., & Rodríguez, Y. (2003). Age and sex differences in self-esteem among Spanish adolescents. *Psychological Reports, 93*, 876-878.

Marsh, H.W., Parada, R.H., Yeung, A.S., & Healey, J. (2001). Aggressive school troublemakers and victims: A longitudinal model examining the pivotal role of self-concept. *Journal of Educational Psychology, 93*, 411-419.

Martin, J.A., & Penn, D.L. (2001). Social cognition and subclinical paranoid ideation. *British Journal of Clinical Psychology, 40*, 261-265.

Matud, P., Ibáñez, I., Marrero, R., & Carballeira, M. (2003). Diferencias en autoestima en función del género. *Análisis y Modificación de Conducta, 29*, 51-78.

McCabe, R.E., Blankstein, K.R., & Mills, J.S. (1999). Interpersonal sensitivity and social problem-solving: Relations with academic and social self-esteem, depressive symptoms and academic performance. *Cognitive Therapy and Research, 23*, 587-604.

McCarthy, J.D., & Hoge, D.R. (1982). Analysis of age effects in longitudinal study of adolescent self-esteem. *Developmental Psychology, 18,* 372-379.

Newbegin, I., & Owens, A. (1996). Self-esteem and anxiety in secondary school achievement. *Journal of Social Behavior and Personality, 11*, 521-530.

O'Moore, M, & Kirkham, C. (2001). Self-esteem and its relationship to bullying behaviour. *Aggressive Behavior, 27*, 269-283.

Pastor, Y., Balaguer, I., & García-Merita, M. (2006). Relaciones entre el autoconcepto y el estilo de vida saludable en la adolescencia media: un modelo exploratorio. *Psicothema, 18*(1), 18-24.

Plutchik, R., Botsis, A.J., & Van Praag, H.M. (1995). Psychopathology, self-esteem, sexual and ego functions as correlates of suicide and violence risk. *Archives of Suicide Research, 1*, 27-38.

Robins, R.W., Trzesniewski, K.H., Tracy, J.L., Gosling, S.D., & Potter, J. (2002). Global self-esteem across the life span. *Psychology and Aging, 17*(3), 423-434.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Rigby, K., & Slee, P.T. (1993). Dimensions of interpersonal relation among Australian children and implications for psychological well-being. *Journal of Social Psychology, 133*, 33-42.

Silber, E., & Tippett, J. (1965). Self-esteem: Clinical assessment and measurement validation. *Psychological Reports, 16,* 1017-1071.

Takakura, M., & Sakihara, S. (2001). Psychosocial correlates of depressive symptoms among Japanese high school students. *Journal of Adolescent Health, 28*, 82-89.

Trzesniewski, K.H., Donnellan, M.B., & Robins, R.W. (2003). Stability of self-esteem across the life span. *Journal of Personality and Social Psychology, 84*(1), 205-220.

Trzesniewski, K.H.F. (2004). A cohort-sequential study of self-esteem from age 25 to 96. *Dissertation Abstracts International: Section B: The Sciences and Engineering, 64*(7-B), 3562.

Valentine, I.S. (2001). The relationship between depression, self-esteem, trauma and psychopathy in understanding conduct disordered adolescents. *Dissertation Abstracts International Section B: The Sciences and Engineering, 61* (10-B), 5585.

Varni, J.W., Rapoff, M.A., Waldron, S.A., & Gragg, R.A. (1996). Chronic pain and emotional distress in children and adolescents. *Journal of Developmental and Behavioral Pediatrics, 17*, 154-161.

Watson, D.C. (1998). The relationship of self-esteem, locus of control and dimensional models to personality disorders. *Journal of Social Behavior and Personality, 13*, 399-420.

Whitley, B.E., & Gridley, B.E. (1993). Sex role orientation, self-esteem and depression: A latent variables analysis. *Personality and Social Psychology Bulletin, 19*, 363-369.

Wilgenbush, T., & Merrel, K.W. (1999). Gender differences in self-concept among children and adolescents: A meta analysis of multidimensional studies. *School Psychology Quarterly, 14,* 101-120.

Yang, D. (2002). Depression, anxiety and self-concept of middle school students. *Chinese Mental Health Journal, 16*, 633-635.

Yuang, X. (2000). Correlation between self-esteem and mental health of secondary normal school students. *Chinese Journal of Clinical Psychology, 8*, 102-103.