



Psychopathological symptoms, behavioural problems, and self-concept/self-esteem: A study of adolescents aged 14 to 17 years old

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ABSTRACT

The purpose of this study is three-fold: 1) to evaluate the existence of gender differences in self-concept/self-esteem, 2) to study the concomitant relationships between psychopathological symptoms, behavioural problems, and self-esteem/self-concept, and 3) to identify the predictive variables of high self-concept and self-esteem. The sample consists of 322 adolescents aged 14 to 17 years old (53.4% boys, 45.3% girls). This study uses correlational methodology. In order to assess psychopathological symptoms (somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, melancholic depression), behavioural problems (problems at school, antisocial behaviour, shyness and timidity, psychopathological problems, anxiety, psychosomatic problems, social adjustment), and self-concept/self-esteem the following form and scales are used: form SCL-90-R, the EPC Behavioural Problems Scale, the AF-5 Self-Concept Scale and the Rosenberg Self-esteem Scale. ANOVAs show higher scores of self-esteem in boys. However, there are no gender differences in global self-concept. Pearson coefficients suggest that adolescents with high-self concept and high self-esteem have a low level of psychopathological symptoms and behavioural problems. Multiple regression analyses allow to identify the following variables as predictive of self-concept/self-esteem: few depression symptoms, few problems at school, and few symptoms of interpersonal sensitivity. The role played by intervention programs promoting self-concept and self-esteem in the prevention of psychopathological and behavioural problems is also discussed.

Key words: psychopathological problems, behavioral problems, self-concept, self-esteem, adolescence

INTRODUCTION

During the past few years, research on self-concept and self-esteem has been gaining relevance within identification of factors preventing psychopathological problems. In order to prevent psychopathological problems during adolescence it is necessary to identify intervention variables which can help configure programs to be applied during childhood and adolescence. Following this perspective, this study is aimed at identifying factors playing a preventive role against psychopathologic and behavioural problems during adolescence. The paper analyses the relation-

ships between a key component in the study of personality, self-concept / self-esteem with psychopathological symptoms (somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, and melancholic depression), and with behavioural problems (problems at school, antisocial behaviour, shyness and timidity, psychopathological problems, anxiety, psychosomatic problems, social adjustment).

Definition of self-concept/self-esteem and gender differences

Although many research papers have been written as a result of the interest awoken by self-concept, there is certain conceptual confusion, since terms such as self-concept, self-image, self-esteem and self-acceptance are used interchangeably. Although the terms most frequently used are self-concept and self-esteem, in an attempt to distinguish these concepts some authors associate the term self-concept with the

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cognitive aspects of self-knowledge and leave the term self-esteem for evaluative-affective aspects.

Following this line of thought, Fierro (1990) claims that self-concept equals self-knowledge, where all types of activities and cognitive contents (not just concepts, but also percepts, images, judgement and reasoning processes, mnemonic performances...) are gathered. The self-judgement process is usually the cornerstone of the whole self-knowledge system. There are at least two kinds of self-judgement processes: descriptive and evaluative. Descriptive self-judgement has to do with how we really are, taking into account our age, sex, profession, physical characteristics, behaviour, etc. Evaluative judgement is related to the appreciation or assessment we apply to each of our characteristics. Self-esteem is considered the evaluative component of self-concept and self-knowledge.

The relationship between self-concept (descriptive) and self-esteem (evaluative) has a hierarchical nature. Self-description contributes to positive self-appraisal which, in turn, protects the subject's system. However, all self-descriptive statements usually involve evaluative statements, because statements regarding ourselves always imply some degree of appraisal. In that regard, since it is not easy to separate the cognitive from the emotional aspect, the term self-concept is generally accepted in a wide sense including both aspects. Cardenal & Ferro (2003), who have recently defined self-concept as a group of descriptive and evaluative statements about oneself, believe that self-concept represents the manner in which the subjects portray, know and appraise themselves, pointing out that although the terms self-concept and self-esteem are used interchangeably, self-esteem is –strictly speaking– the evaluative component within self-concept and self-knowledge.

The results obtained in the studies that have assessed gender differences in self-concept and self-esteem differ widely. In studies showing gender differences, women report lower global self-concept (Amezcuca & Pichardo, 2000; Wilgenbush & Merrel, 1999), lower global physical and academic self-concept (Nelson, 1996), as well as higher social and family self-concept (Amezcuca & Pichardo, 2000). However, other studies have not found any significant differences either in self-concept (Garaigordobil, Cruz & Pérez, 2003) or self-esteem (Lameiras & Rodríguez, 2003).

Psychopathological symptoms, behavioural problems, and self-concept/self-esteem

The studies that have evaluated the links between self-concept / self-esteem and psychopathological symptoms and behavioural problems show inverse relations between both variables. According to Watson (1998), low self-esteem is a strong predictor of personality disorders and psychopathological symptoms (Erol, Toprak & Yazici, 2002). Furthermore, there are other studies which show a positive relationship between personal self-esteem, social self-esteem and mental health (Montt & Chavez, 1996). Additionally, Fan & Fu (2001) have discovered that there is a positive relationship between self-concept and mental health. The results of the studies regarding the connections between these variables with self-concept and self-esteem, which were carried out using the psychopathological scales from SCL-90-R, as well as the EPC behavioural problems, are shown below.

Psychosomatic problems: The study conducted by Varni, Rapoff, Waldron & Gragg (1996) showed that those subjects with the highest perception of pain intensity developed more anxious-depressive symptoms, had lower self-esteem and a higher number of behavioural problems. In addition, the study conducted by Garrick, Ostrov and Offer (1988) suggests that subjects with normal self-concept were significantly free from any physical symptoms, and Dowd (2002) establishes an inverse relationship between self-concept and somatic symptoms in adolescents.

Obsession-compulsion: Biby (1998) associates low self-esteem with high obsessive-compulsive tendencies. Body image or body esteem correlated negatively with obsessive-compulsive symptoms in the study carried out by Bohne, Keuthen, Wilhelm, Deckersback & Jenike (2002). Similarly, Watson (1998) found that low self-esteem was a strong predictor of obsessive-compulsive personality disorders.

Interpersonal sensitivity: Kim (2003) and Fan & Fu (2001) have detected a negative relationship between self-esteem and interpersonal sensitivity, and so have Jackson & Cochran (1991), who consider interpersonal sensitivity equivalent to low self-esteem.

Depression: Various studies report negative correlations between self-concept/self-esteem and depression (Alfeld & Sigelman, 1998; Fan & Fu, 2001; Hoffmann, Baldwin & Cerbone, 2003; Kim, 2003; Valentine, 2001). Other studies show that high self-esteem is a factor which protects against depressive symptoms (Takakura & Sakihara, 2001), and a predictive factor of depression (Dowd, 2002) and suicidal ideation (Jin & Zhang, 1998). Physical self-concept has also correlated negatively with depression in some studies (Bohne *et al.*, 2002; Erkolahiti, Ilonen, Saarijarvi & Terho, 2003).

Anxiety: Some studies demonstrate inverse relations 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.

Paranoid ideation: Ellett, Lopes & Chadwick (2003) associated paranoid ideation with low self-esteem, as shown in the study conducted by Martín & Penn (2001).

Neuroticism-Psychoticism: Negative correlations of self-concept with neuroticism (García Torres, 1983) and with psychoticism (Fan & Fu, 2001; Fierro & Cardenal, 1996; Heaven, 1991) have been established.

Academic problems: The results obtained in studies that analyse relations between academic problems and self-concept vary widely, because while some conclude that low academic self-concept is associated with low academic performance (García-Bacete & Musitu, 1993; González, Tournó & Iriarte, 1994), and that low self-esteem is associated with maladjustment at school (Aunola, Stattin & Nurmi, 2000), other studies do not reveal direct relations between academic performance and self-esteem (Leondari & Giamalas, 2000).

Antisocial behaviour: The results obtained from the studies show inverse correlations between antisocial behaviour and positive self-concept and self-concept/self-esteem. The data suggest that adolescents with high positive self-concept and high self-concept/self-esteem engage in few antisocial behaviours (Calvo, González & Martorell, 2001). It has also been proved that adolescents with low self-esteem engage in more threatening and intimidating behaviours towards others (O'Moore & Kirkham; Rigby & Slee, 1993) and have higher levels of criminal behaviour (Weist, Paskewitz, Jackson & Jones, 1998). Regarding aggressive behaviour, Marsh, Parada, Yeung & Healey (2001) study the characteristics of aggressive individuals (who are seen as troublemakers, who get into fights, and who are usually getting punished for getting into trouble) proving that they have low self-concept.

Social withdrawal behaviours: Another group of studies (Lawrence & Bennett, 1992; Neto, 1992), which analyses social withdrawal, isolation and shyness behaviours, finds negative relations with self-concept/self-esteem which indicate that adolescents with high self-concept/self-esteem are less likely to engage in withdrawal, isolation and shyness behaviours in social relationships. Furthermore, a low level of anxiety/shyness and withdrawal behaviours prove to be predictive variables of global self-concept (Garaigordobil *et al.*, 2003), while on the same study, many anxiety/shyness and withdrawal behaviours predict a high negative self-concept.

Social adjustment: Generally speaking, the results from the studies suggest that individuals with high self-concept show good social adjustment, along with prosocial behaviours, a helpful attitude and social respect. Research shows that those adolescents with many prosocial behaviours have low negative self-concept, high positive self-concept and high self-concept/self-esteem (Calvo *et al.*, 2001), high academic, social and family self-concept (Gutiérrez & Clemente, 1993), and high self-esteem (Rigby & Slee, 1993). Adolescents who show consideration for other people have a high social self-concept, and those who engage in many altruistic behaviours have a high social, academic and global self-concept (Garaigordobil *et al.*, 2003). In addition, significant relationships have been found between high self-concept and a higher tendency to defend the assaulted victim (Salmivalli, 1998), and to show an attitude of social respect (Yelsman & Yelsman, 1998).

Objectives and hypothesis of the study

The objectives of the study are: 1) to explore the differences in self-concept self-esteem according to gender; 2) to analyse the relationships between (academic, social, family, emotional, physical and global) self-concept and self-esteem with psychopathological symptoms (somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, and melancholic depression), and behavioural problems (problems at school, antisocial behaviour, shyness and timidity, psychopathological problems, anxiety, psychosomatic problems, social adjustment), as well as 3) to identify the predictive variables of high self-concept / self-esteem.

Taking the above-mentioned studies as a starting point, this study presents 4 hypothesis: 1) There are significant differences in self-concept/self-esteem according to gender; 2) Global self-concept and self-esteem have negative correlations with psychopathological symptoms and behavioural problems; 3) Global self-concept and self-esteem have positive correlations with social adjustment; and 4) A low level of psychopathological symptoms and behavioural problems will be predictors of high self-concept/self-esteem.

METHOD

Participants

The sample consists of 322 adolescents aged 14 to 17 years old. A total of 42.8% (138 participants) are 14 years old, 32.9% (106 participants) are 15, 14.6% (47 participants) are 16, and 4% (13 participants) are 17. The mean age in the sample is 14.7 years. The participants are distributed into 16 groups and enrolled in 4 school centres in Guipúzcoa. Nine groups of the sample (193 participants) belong to the third grade of Compulsory High School and the other seven groups (129 participants) are from the fourth grade. 53.4% (172) are male and 45.3% (146) are female. Most of the participants (83.2%) live with their parents, while the rest of the sample (11.7%) does not and 5.1% did not report their situation.

In the sample that was analysed, 110 subjects (34.2%) are studying in a public education centre, whereas 212 (65.8%) study in private education centres. As regards socio-economical and cultural level, both parents were asked to identify their level of education. Almost one fourth of the sample shows that the father has studied until he was 14 (23%) or has graduated from University (23.9%), whereas almost a forth of all mothers (23.9%) have graduated (20.5%) from University. The majority of fathers (90.4%) and mothers (80.4%) work. There are very few fathers who are unemployed (1.2%) or retired (0.9%) and 1.6% of mothers are unemployed, 0.6% are retired, 0.3% are looking for their first job and 11.5% are housewives. All participants were informed of the research objectives as well as the fact that the participation in it was voluntary, and were requested to sign the informed consent form.

Design and procedure

The study uses a correlational methodology, seeking to establish concomitant relationships between psychopathological symptoms (somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, and melancholic depression), behavioural problems (problems at school, antisocial behaviour, shyness and timidity, psychopathological problems, anxiety, psychosomatic problems, social adjustment) and self-esteem/self-concept. To this end, four assessment tools were administered. During February and March 2004, the adolescents were subjected to evaluation techniques in two evaluation sessions. In addition, parents were given a questionnaire to fill in, which explores various behavioural problems (EPC). Parents were included in the data collection in order to contrast the assessment of variables that were also measured through self-reports.

Materials and/or Instruments

Four instruments are used to explore the following variables: self-concept, self-esteem, psychopathological symptoms, and behavioural problems.

SCL-90-R - Symptoms Checklist-90-Revised (Derogatis, 1983/2002). This self-report has 90 items distributed into 10 scales which report the psychopathological disorders: *somatization* (12 symptoms related to bodily dysfunctions, neuro-vegetative disorders in cardiovascular, respiratory, gastrointestinal and muscular systems), *obsession-compulsion* (10 symptoms reflecting behaviours, thoughts and impulses that the subject considers absurd and undesirable, which create deep anguish and which are hard to resist, avoid or get rid of), *interpersonal sensitivity* (9 symptoms reflecting feelings of shyness and embarrassment, tendency to feel inferior to others, hypersensitivity to other people's opinions and attitudes and, in general, awkwardness and inhibition in interpersonal relations), *depression* (13 symptoms reflecting clinical signs and symptoms of depressive disorders, including dysphoric experiences, anhedonia, hopelessness, impotence and lack of energy, as well as self-destructive ideas and other cognitive and somatic manifestations typical of depressive states), *anxiety* (10 symptoms related to the clinical manifestations of anxiety, both generalised and acute or "panic", including general signs of emotional stress and its psychosomatic manifestations), *hostility* (6 symptoms related to thoughts, feelings and behaviours of aggressiveness, anger, irritability, rage and resentment), *phobic anxiety* (7 symptoms reflecting different variants of phobic experience, understood as a persistent, irrational and out-of-proportion fear of an animal or individual, place, object or situation, generally aggravated by avoidance or escape behaviours, focusing more on the scale of social phobia and agoraphobia symptoms than on that of simple phobia), *paranoid ideation* (6 symptoms of paranoid behaviour, considered mainly as the response to a delusional disorder including suspiciousness, self-referential centralism and delirious ideation, hostility, grandiosity, fear of loss of autonomy and need for control), *psychoticism* (10 symptoms which configure the psychotic spectrum ranging from slight schizoid thinking to florid psychosis, and which in the general population is more frequently associated with feelings of social alienation than with clinically manifest psychosis), and *additional scale* (7 miscellaneous symptoms that make up a clear referent of melancholic depression). Furthermore, the test makes it possible to calculate the *General Symptomatic Index* (GSI), which is a standard and indiscriminate measure of the intensity of global psychosomatic and psychic suffering, the *Positive Symptom Total* (PST), which is the number of existing symptoms, and the *Positive Symptom Distress Index* (PSDI), which links suffering or global distress with the number of symptoms. The results of studies conducted with Spanish sample (González de Rivera *et al.*, 2002) prove the reliability of the test, since they are consistent with those conducted by the author (Derogatis, 1983). The coefficient alpha values range from 0.81 to 0.90. Coefficients of internal consistency show that the homogeneity of the items which make up each dimension is very high, with a high correlation between them. Temporal stability (0.78 and 0.90) with

a test-retest interval of one week shows stability of scores in the long run. Other studies which have strengthened the validity are those that show the relationship between the profile of symptomatic dimensions and the diagnostic group where the clinical sample belongs. As a result, for instance, scores are significantly higher in psychiatric samples than in non-clinical ones (De las Cuevas, 1991; González de Rivera *et al.*, 1999). The author's original American studies prove the construct validity (Derogatis & Cleary, 1977) and convergent validity, given the high correlations of symptomatic dimensions with the MMPI in psychiatric patients (Derogatis, Rickels & Rock, 1976), and the criterion or empirical validity (Derogatis, 1983).

EPC. Behavioural Problems Scale (Navarro, Peiró, Llácer & Silva, 1993). It is a scale with 99 items, and it is filled in by the parents to assess behavioural problems. The items are grouped in 7 scales: *academic problems* (related to low academic performance), *antisocial behaviour* (behaviours that may be classified as aggressive, and other behaviours which are not aggressive but might impair social relationships), *shyness and timidity* (tendency to solitude and susceptibility in social relationships), *psychopathological problems* (serious problems which have, in general, a depressive component), *anxiety problems* (related with fear and generalized anxiety), *psychosomatic problems* (idiopathic physical disorders), and a positive scale of *social adjustment* (adjustment to social rules). Parents must report whether their children engage or not in these behaviours. As regards the reliability of the scale, information about the internal consistency of the whole EPC has been gathered ($\alpha=0.88$). At the same time, the EPC was applied in two occasions with a temporal interval of 9 months, resulting in an α coefficient between 0.71 and 0.88 in different scales. To test the criterion validity, the EPC was applied to different samples in children and adolescents (referred to the school psychologist due to problems at school, referred to a clinical psychologist, and inmates in prison due to criminal problems) and the multiple regression analysis showed that belonging to different criterion groups was the variable that presented the highest level of relations in the EPC scores.

AF-5 Self-Concept Form 5. (García & Musitu, 1999). This form has 30 statements that must be rated from 1 to 99 according to the degree of agreement with the content of each statement. It measures 5 dimensions of self-concept: *academic and job-related self-concept* (perception that the subject has on the quality of his/her performance in his/her role as a student and as a worker), *social self-concept* (perception of the subject's own performance in social relationships), *emotional self-concept* (perception of the subject's own emotional state and responses to specific situations, with a certain degree of commitment and involvement in his/her everyday life, general perception of his/her emotional state and in specific situations), *family self-concept* (perception that the subject has on his/her involvement, participation and integration in the family unit), *physical self-concept* (perception that the subject has on his/her physical appearance and his/her physical state). The factorial structures proves theoretical dimensions satisfactorily, components justify 51% of total variance and the alpha coefficient of internal consistency is 0.81. The five dimensions have intercorrelations ranging

from 0.00 to 0.32. In order to calculate temporal consistency, AF-5 was applied to 478 subjects from the sample with a temporal interval of six months. Pearson correlation was calculated between the scores of each of the dimensions. The highest score is found in the academic component (0.70), followed by the physical component (0.66), the family one (0.56), the social one (0.53) and the emotional one (0.52). The six items that make up each of the five dimensions have been selected assuming that each item represents the dimension that it must assess (convergent validity) and that it is not related to other dimensions (discriminant validity). However, given that every case approaches items assessing self-concept, it seems reasonable to assume that there will be a relationship between them. In order to select the items that make up AF-5 a procedure suggested by experts was followed, from a total of 335 items built on the definitions about themselves that 315 subjects provided. In order to contrast empirically the theoretical validity of the five components, factorial analysis was applied.

RSE. Self-Esteem Scale (Rosenberg, 1965). This scale assesses general self-esteem with 10 statements focusing on global feelings of self-appraisal ("on the whole, I am satisfied with myself"); 5 of them are written in a positive way and the other 5 in a negative way. The subject must read the statements and report up to what extent 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 & Hoge (1982) have reported

consistency coefficients (Cronbach's *alpha*) ranging from 0.74 to 0.77, and test-retest reliability of 0.63 (interval of 7 months) and of 0.85 (interval of two weeks). The validity of the scale as a one-dimensional measure of self-esteem has also been proved in several studies (Rosenberg, 1965; Silber & Tippett, 1965).

RESULTS

Gender differences in self-esteem and self-concept

Firstly, an ANOVA was used to find out whether there were any significant differences between self-esteem and self-concept according to gender (see Table 1). The results showed that there were differences in self-esteem, $F(1,316) = 35.86, p < .001$, in academic self-concept, $F(1,316) = 7.27, p < .01$, in emotional self-concept, $F(1,316) = 16.80, p < .001$, in family self-concept, $F(1,316) = 4.01, p < .05$, and in physical self-concept, $F(1,316) = 18.75, p < .001$. The results point out that there are differences in self-esteem and in some dimensions of self-concept. Boys show higher self-esteem, emotional and physical self-concept, whereas girls have higher scores in academic and family self-concept. However, although boys have a higher mean score in global self-concept than girls, no differences were found between them. Social self-concept, where the scores are similar, showed no differences either. Given these results, correlational analyses aimed at exploring the relations between self-esteem/self-concept and psychopathological symptoms / behavioural problems are conducted separately.

	Boys (n = 172)		Girls (n = 146)		Anova F (1, 316)
	M	DT	M	DT	
Rosenberg Self-Esteem Scale	31.65	4.64	28.21	5.47	35.86***
AF-5 Academic Self-Concept	5.42	2.14	6.09	2.13	7.27**
AF-5 Social Self-Concept	7.35	1.45	7.49	1.38	0.71
AF-5 Emotional Self-Concept	6.39	1.75	5.57	1.74	16.80***
AF-5 Family Self-Concept	7.82	2.03	8.28	1.92	4.01*
AF-5 Physical Self-Concept	5.41	1.95	4.45	1.88	18.75***
AF-5 Global Self-Concept	32.43	6.02	31.97	6.02	0.42

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

Table 1. Means, standard deviations and results from the variance analysis on self-esteem and self-concept according to gender.

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

In order to explore the relations between psychopathological symptoms and self-concept/self-esteem, Pearson correlation coefficients were calculated using the scores from SCL-90-R, AF-5 and RSE, whose results are shown in Tables 2 and 3.

As shown in Table 2, there are significant inverse correlations between academic self-concept and family self-concept and all the psychopathological variables. Social self-concept in boys also shows negative correlations with all the variables, but in girls there are no correlations with somatization, interpersonal sensitivity, hostility, melancholic depression (additional) and with the Positive Symptom Distress Index. Emotional self-concept in girls also has negative correlations with all the variables but in boys no correlations with hostility and paranoid ideation were found. And in physical self-concept there are

correlations with all the psychopathological symptoms, except with phobic anxiety in girls.

As regards global self-concept (See Table 2), the results show significant negative correlations with all the psychopathological symptoms in both genders. In boys, there are relations between global self-concept and somatization, $r(157) = -0.38, p < .001$, obsession-compulsion, $r(159) = -0.37, p < .001$, interpersonal sensitivity, $r(159) = -0.57, p < .001$, depression, $r(156) = -0.52, p < .001$, anxiety, $r(157) = -0.41, p < .001$, hostility, $r(158) = -0.40, p < .001$, phobic anxiety, $r(159) = -0.32, p < .001$, paranoid ideation, $r(158) = -0.38, p < .001$, psychoticism, $r(159) = -0.42, p < .001$, and the additional scale of melancholic depression, $r(158) = -0.43, p < .001$, and the general symptomatic index, $r(150) = -0.52, p < .001$, and the positive symptom total, $r(159) = -0.51, p < .001$, and global distress, $r(149) = -0.38, p < .001$. In girls, the correlations are also significant and negative with somatization, $r(144) = -0.37, p < .001$, obsession-

	Academic AF		Social AF		Emotional AF		Family AF		Physical AF		Global AF	
	B	G	B	G	B	G	B	G	B	G	B	G
Somatization	-0.26***	-0.26**	-0.25**	-0.05	-0.15*	-0.36***	-0.33***	-0.21**	-0.20*	-0.29***	-0.38***	-0.37***
Obsession-compulsion	-0.23**	-0.48***	-0.22**	-0.16*	-0.27***	-0.42***	-0.23**	-0.36***	-0.21**	-0.34***	-0.37***	-0.56***
Interpersonal sensitivity	-0.36***	-0.36***	-0.46***	-0.33	-0.19*	-0.43***	-0.40***	-0.34***	-0.35***	-0.28***	-0.57***	-0.53***
Depression	-0.35***	-0.49***	-0.36***	-0.20*	-0.20**	-0.42***	-0.41***	-0.47***	-0.27***	-0.37***	-0.52***	-0.62***
Anxiety	-0.26***	-0.30***	-0.25**	-0.24**	-0.18*	-0.53***	-0.35***	-0.28***	-0.24**	-0.22**	-0.41***	-0.49***
Hostility	-0.22**	-0.36***	-0.26***	-0.14	-0.14	-0.32***	-0.40***	-0.40***	-0.22**	-0.32***	-0.40***	-0.48***
Phobic Anxiety	-0.20*	-0.26**	-0.28***	-0.26**	-0.17*	-0.45***	-0.20*	-0.29***	-0.19*	-0.09	-0.32***	-0.41***
Paranoid Ideation	-0.23**	-0.20*	-0.26***	-0.20*	-0.14	-0.36***	-0.33***	-0.32***	-0.23**	-0.19*	-0.38***	-0.39***
Psychoticism	-0.24**	-0.35***	-0.30***	-0.19*	-0.18*	-0.31***	-0.35***	-0.37***	-0.24**	-0.19*	-0.42***	-0.45***
Additional	-0.30***	-0.32***	-0.24**	-0.12	-0.21**	-0.33***	-0.32***	-0.39***	-0.24**	-0.29***	-0.43***	-0.45***
GSI	-0.35***	-0.45***	-0.34***	-0.25**	-0.23**	-0.49***	-0.41***	-0.45***	-0.28***	-0.33***	-0.52***	-0.62***
PST	-0.31***	-0.38***	-0.37***	-0.27***	-0.24**	-0.53***	-0.39***	-0.41***	-0.26***	-0.28***	-0.51***	-0.57***
PSDI	-0.24**	-0.44***	-0.19*	-0.11	-0.22**	-0.34***	-0.30***	-0.37***	-0.22**	-0.34***	-0.38***	-0.52***

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

Table 2. Pearson correlation coefficients between psychopathological symptoms and academic, social, emotional, family, physical and global self-concept.

	RSE Boys	RSE Girls
Somatization	-0.23**	-0.23**
Obsession-compulsion	-0.39***	-0.44***
Interpersonal Sensitivity	-0.55***	-0.56***
Depression	-0.54***	-0.62***
Anxiety	-0.40***	-0.39***
Hostility	-0.42***	-0.41***
Phobic Anxiety	-0.17*	-0.39***
Paranoid Ideation	-0.36***	-0.43***
Psychoticism	-0.35***	-0.50***
Additional	-0.43***	-0.46***
GSI	-0.48***	-0.55***
PST	-0.49***	-0.46***
PSDI	-0.32***	-0.57***

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

Table 3. Pearson correlation coefficients between psychopathological symptoms and self-esteem

	Academic AF		Social AF		Emotional AF		Family AF		Physical AF		Global AF	
	B	G	B	G	B	G	B	G	B	G	B	G
Problems at school	-0.54***	-0.76***	-0.19	-0.01	-0.24*	-0.01	-0.26*	-0.38***	-0.30**	-0.47***	-0.48***	-0.55***
Antisocial Behaviour	-0.28**	-0.40***	-0.19	-0.10	-0.01	-0.10	-0.33***	-0.47***	-0.18	-0.16	-0.30**	-0.39***
Shyness and Timidity	-0.24*	-0.09	-0.17	-0.45***	-0.19	-0.27**	-0.27*	-0.19	-0.12	-0.24*	-0.32**	-0.34***
Psychopathological Prb	-0.35***	-0.16	-0.18	-0.26**	-0.25*	-0.25**	-0.28**	-0.15	-0.28**	-0.18	-0.41***	-0.27**
Anxiety	-0.21*	-0.02	0.09	-0.30**	-0.20	-0.33***	-0.09	-0.08	-0.23*	-0.18	-0.22*	-0.24*
Psychosomatic Prob.	-0.35***	-0.29**	-0.22*	-0.20*	-0.30**	-0.27**	-0.37	-0.26**	-0.37***	-0.21*	-0.49***	-0.37***
Social Adjustment	0.29**	0.54***	0.27*	0.06	0.05	0.02	0.40	0.38***	0.36***	0.31**	0.40***	0.43***

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

Table 4. Pearson correlation coefficients between behavioural problems and academic, social, emotional, family, physical and global self-concept.

compulsion, $r(144) = -0.56, p < .001$, interpersonal sensitivity, $r(143) = -0.53, p < .001$, depression, $r(140) = -0.62, p < .001$, anxiety, $r(143) = -0.49, p < .001$, hostility, $r(143) = -0.48, p < .001$, phobic anxiety, $r(144) = -0.41, p < .001$, paranoid ideation, $r(142) = -0.39, p < .001$, psychoticism, $r(143) = -0.45, p < .001$, melancholic depression (additional scale), $r(144) = -0.45, p < .001$, and the general symptomatic index, $r(138) = -0.62, p < .001$, and the positive symptom total, $r(142) = -0.57, p < .001$, and global distress, $r(138) = -0.52, p < .001$.

As regards self-esteem (see Table 3), the results indicate significant and negative correlations in boys and girls with: somatization (boys, $r(157) = -0.23, p < .01$; girls, $r(144) = -0.23, p < .01$), obsession-compulsion (boys, $r(159) = -0.39, p < .001$; $r(144) = -0.44, p < .001$), interpersonal sensitivity (boys, $r(159) = -0.55, p < .001$; girls, $r(143) = -0.56, p < .001$), depression (boys, $r(156) = -0.54, p < .001$; girls, $r(140) = -0.62, p < .001$), anxiety (boys, $r(157) = -0.40, p < .001$; girls, $r(143) = -0.39, p < .001$), hostility (boys, $r(158) = -0.42, p < .001$; girls, $r(143) = -0.41, p < .001$), phobic anxiety (boys, $r(159) = -0.17, p < .05$; girls, $r(144) = -0.39, p < .001$), paranoid ideation (boys, $r(158) = -0.36, p < .001$; girls, $r(142) = -0.43, p < .001$), psychoticism (boys, $r(159) = -0.35, p < .001$; girls, $r(143) = -0.50, p < .001$), melancholic depression (additional scale) (boys, $r(158) = -0.43, p < .001$; girls, $r(144) = -0.46, p < .001$). At the same time, the results indicate negative correlations with the general symptomatic index (boys, $r(150) = -0.48, p < .001$; girls, $r(138) = -0.55, p < .001$), with the positive symptom total (boys, $r(155) = -0.49, p < .001$; girls, $r(142) = -0.46, p < .001$), and with global distress (boys, $r(149) = -0.32, p < .001$; girls, $r(138) = -0.57, p < .001$).

These results indicate that male and female adolescents who show high global self-concept and high self-esteem develop fewer psychopathological symptoms in all psychopathological scales, enjoying better mental health.

Relations between behavioural problems and self-concept/self-esteem

Tables 4 and 5 show Pearson coefficients obtained by analysing the relations between behavioural problems and self-concept/self-esteem.

As shown in Table 4, there are some variations in the correlations present between different dimensions of self-concepts and various problems according to gender. However, when global self-concept is explored, both genders show significant negative correlations with all the behavioural problems: problems at school (boys, $r(90) = -0.48, p < .001$; girls, $r(102) = -0.55, p < .001$), antisocial behaviour (boys, $r(91) = -0.30, p < .01$; girls, $r(103) = -0.39, p < .001$), shyness and timidity (boys, $r(88) = -0.32, p < .01$; girls, $r(101) = -0.34, p < .001$), psychopathological disorders (boys, $r(90) = -0.41, p < .001$; girls, $r(98) = -0.27, p < .01$), anxiety problems (boys, $r(91) = -0.22, p < .05$; girls, $r(102) = -0.24, p < .05$) and psychosomatic problems (boys, $r(92) = -0.49, p < .001$; girls, $r(102) = -0.37, p < .001$). However, the results indicate positive relations with social adjustment (boys, $r(87) = 0.40, p < .001$; girls, $r(98) = 0.43, p < .001$). These data suggest that both female and male adolescents with high global self-concept show, according to their

parents' report, few problems at school, few antisocial behaviours, little shyness-timidity, few psychopathological problems, few anxiety problems, and few psychosomatic problems, enjoying good social adjustment.

From the relations between self-esteem and behavioural problems (see Table 5), it can be proved that there are negative correlations with problems at school (boys, $r(90) = -0.23, p < .05$; girls, $r(102) = -0.36, p < .001$), antisocial behaviour (girls, $r(103) = -0.25, p < .01$), shyness and timidity (boys, $r(88) = -0.25, p < .05$; girls, $r(101) = -0.27, p < .01$), psychopathological problems (boys, $r(90) = -0.23, p < .05$; girls, $r(98) = -0.30, p < .01$), psychosomatic problems (boys, $r(92) = -0.21, p < .05$), and positive correlations with good social adjustment (boys, $r(87) = 0.27, p < .01$).

	RSE Boys	RSE Girls
Problems at School	-0.23*	-0.36***
Antisocial Behaviour	-0.19	-0.25**
Shyness and Timidity	-0.25*	-0.27**
Psychopathological Problems	-0.23*	-0.30**
Anxiety	-0.15	-0.13
Psychosomatic Problems	-0.21*	-0.18
Social adjustment	0.27**	0.16

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

Table 5. Pearson correlation coefficients between behavioural problems and self-esteem

These data suggest that both male and female adolescents with high self-esteem show, according to their parents' opinion, fewer problems at school, less shyness and timidity and fewer psychopathological problems. But it is only boys who have fewer psychosomatic problems and higher social adjustment, and it is only girls who show less antisocial behaviour. No relations between self-esteem and anxiety problems were found in either gender.

Predictive variables of self-concept/self-esteem

In order to explore the variables predicting good self-esteem and good global self-concept, i.e., a high score in these criterion variables, a multiple linear regression analysis was conducted, step by step, and its results are shown in Table 6.

As shown in Table 6, out of the group of predictive variables of self-esteem, one turned out to be statistically significant: depression symptoms (Beta = -0.654). The standardised regression coefficient Beta indicates that the variable somewhat affects the criterion variable. According to this statement, the percentage of the variance explained (adjusted determination coefficients) by the predictive variable showed medium magnitude (42.4%). Few psychopathological depression symptoms (including dysphoric experiences, anhedonia, hopelessness, impotence and lack of energy, as well as self-destructive ideas and other cognitive and somatic manifestations typical of depressive states) turned out to be the predictive variable of the self-esteem criterion variable, presenting a medium explanatory power, given that this predictive variable explains 42.4% of the variance.

	R	R ²	R ² adjusted	Standard Error	B	Standard Error	Constant	Beta	t
<i>Self-Esteem</i>									
SCL-90-R Depression	0.65	0.42	0.42	4.16	-0.37	0.03	33.67	-0.654	-10.72 ***
<i>Global Self-Concept</i>									
SCL-90-R Depression	0.57	0.32	0.32	4.83	0.12	0.07	36.34	-0.211	-1.83 +
EPC Problems at School	0.64	0.42	0.41	4.49	-0.31	0.05	37.87	-0.337	-5.33 ***
SCL-90-R Interpersonal Sensitivity	0.67	0.45	0.44	4.38	-0.30	0.10	38.72	-0.331	-2.93 **

+ $p < .06$ * $p < .05$ ** $p < .01$ *** $p < .001$

Tabla 6. Análisis de regresión múltiple lineal para variables predictoras de autoestima y el autoconcepto

From the group of predictive variables of global self-concept (see Table 6), three turned out to be statistically significant: depression symptoms (Beta 0 = -0.211), problems at school (Beta = -0.337), and interpersonal sensitivity (Beta = -0.331). The standardised regression coefficient Beta indicates that all variables somewhat affect the criterion variable. According to this statement, the percentages of variance explained (adjusted determination coefficients) by each of those predictive variables were of medium magnitude for the three variables (32.1 %, 41.2 %, y 44.1 %, respectively). Few psychopathological depression symptoms, few problems at school and a low level of interpersonal sensitivity symptoms were predictive variables of the global self-concept criterion variable, presenting a medium explanatory power, given that these predictive variables explain 44.1% of the variance.

DISCUSSION

The results prove, first and foremost, that there are gender differences in some dimensions of self-concept and self-esteem in the age range in which this study was conducted, i.e., in adolescents that are between 14 and 17 years old. Boys show higher self-esteem, emotional and physical self-concept, whereas girls have higher scores in academic and family self-concept. However, although boys have a higher mean score in global self-concept than girls, no statistically significant differences were found between them. Social self-concept, where the scores are similar for boys and girls, showed no differences either. Hence, Hypothesis 1 is partially proved, because although there are gender differences in self-esteem, they are not present, however, in global self-concept. These results follow the same trend of the studies that found that women show lower physical self-concept (Nelson, 1996) and higher family self-concept (Amezcuca & Pichardo, 2000), as well as those which have not found any significant gender differences in global self-concept (Garaigordobil *et al.*, 2003). However, our results contradict those from other studies in which women show lower scores in global self-concept (Amezcuca & Pichardo, 2000; Wilgenbush & Merrel, 1999) and in academic self-concept (Nelson, 1996) and higher scores in social self-concept (Amezcuca & Pichardo, 2000). They also contradict results from studies that have not found any differences in self-esteem (Lameiras & Rodríguez, 2003). The different assessments tools used in the studies may explain these differences.

Secondly, the results from the study indicate that both male and female adolescents with high global

self-concept and high self-esteem show fewer psychopathological symptoms in all scales (somatization, obsession-compulsion, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism, additional), enjoying better mental health. Additionally, it was found that both male and female adolescents with high global self-concept also have, according to their parents, fewer behavioural problems (problems at school, antisocial behaviour, shyness and timidity problems, psychopathological problems, anxiety problems and psychosomatic problems). In the case of self-esteem, both male and female adolescents with high self-esteem have, from their parents' point of view, fewer problems at school, fewer shyness and timidity problems and fewer psychopathological problems. However, in the case of antisocial behaviour, only women show fewer behaviours of this kind. And, in psychosomatic problems, only males show fewer psychosomatic problems. No relations between self-esteem and anxiety problems were found in either gender. These results prove Hypothesis 2 partially, demonstrating that both male and female adolescents with high global self-concept show fewer psychopathological symptoms and fewer behavioural problems according to their parents. Individuals with high self-esteem also show fewer psychopathological symptoms and have a tendency to have fewer behavioural problems (problems at school, shyness-timidity problems, psychopathological problems). These data are consistent with previous studies which show inverse relations of self-concept/self-esteem with different psychopathological symptoms (Bohne *et al.*, 2002; Dowd, 2002; Ellet *et al.*, 2002; Fan & Fu, 2001; Hoffmann *et al.*, 2003; Kim, 2003; Valentine, 2001) and with behavioural problems such as problems at school (Aunola *et al.*, 2000; García-Bacete & Musitu, 1993; González *et al.*, 1994) or shyness/timidity behaviours (Lawrence & Bennett, 1992; Neto, 1992). In this sense, although relations between self-concept and all the behavioural problems analysed in this study are consistent with the results proved in previous literature, our results do not prove that there are significant inverse relations between self-esteem and anxiety problems (behaviours reflecting generalized fear and/or anxiety) and they only prove that these relations are present in one of the genders, such as the case of antisocial behaviours (women) and psychosomatic problems (men).

On the other hand, the results obtained from the study suggest that both male and female adolescents with high global self-concept and boys with high self-

esteem show, in their parents' report, good social adjustment. These results prove almost everything about Hypothesis 3, since the only thing that is not proved is the relation between self-esteem and social adjustment in women. These data follow the trend of studies which have found that adolescents with high self-concept/self-esteem have good social adjustment, showing numerous prosocial behaviours, along with an attitude of help and social respect (Calvo *et al.*, 2001; Garaigordobil *et al.*, 2003; Gutiérrez y Clemente, 1993; Rigby & Slee, 1993; Salvimalli, 1998; Yelsman & Yelsman, 1998).

Finally, the results suggest that from the group of predictive variables of self-esteem, one turned out to be statistically significant: depression symptoms. As regards predictive variables of global self-concept, three were significant: depression symptoms, problems at school and symptoms of interpersonal sensitivity. Therefore, few psychopathological depression symptoms (symptoms of depressive disorders including dysphoric experiences, anhedonia, hopelessness, impotence and lack of energy, as well as self-destructive ideas and other cognitive and somatic manifestations typical of depressive states), few problems at school (related to low academic performance), and low level of symptoms of interpersonal sensitivity (symptoms reflecting feelings of shyness and embarrassment, tendency to feel inferior to others, hypersensitivity to other people's opinions and attitudes and, in general, awkwardness and inhibition in interpersonal relations) turned out to be predictive variables of the global self-concept criterion variable. These results prove Hypothesis 4 of the study. The results of the study affect the prevention context and suggest that intervention programs promoting self-concept and self-esteem may prevent the development of psychopathological problems associated with depression and interpersonal sensitivity, as well as have a positive effect on adolescents' academic performance. In this sense, according to Amezcua & Pichardo (2000) we find it advisable to focus intervention on specific aspects of self-concept/self-esteem (academic, social, emotional, family and physical aspects), since it will be through them that we will be able to have a global impact on construct, and in this way prevent the development of psychopathological and behavioural problems.

Clearly, many factors (biological, psychological, family, interpersonal and other factors) must be taken into account in the prevention and treatment of this kind of problems in adolescents. However, our study supports the evidence that high self-concept/self-esteem may model favourably the negative impact of many of these variables. Additionally, it should be stressed that attachment and affect regulation can play a major role in the treatment of adolescents with behavioural problems. Following this perspective, Keiley (2002) concludes that teaching parents and children to solve problems, address their feelings appropriately and reconnect with one another are effective intervention strategies. This emphasises the relevant role of family in the treatment of these behavioural disorders.

The limitation of the study was that, since the data have a correlational nature, they contribute very little to the causal relation that might be present between said variables. As a result, it is suggested that

this construct be analysed with a quasi-experimental research methodology.

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