

A Comparative Analysis of Empathy in Childhood and Adolescence: Gender Differences and Associated Socio-emotional Variables

Maite Garaigordobil*

Universidad del País Vasco, España

ABSTRACT

This study has two objectives: 1) to carry out a comparative exploration of empathy and a set of socio-emotional variables in childhood and adolescence, analyzing gender differences; and 2) to analyze the relationship of empathy with social behaviour, sociometric choice of prosocial classmate, self-concept and capacity for analyzing negative emotions in children and in adolescents. The sample is made up of 313 participants aged 10 to 14 years. The methodology used is descriptive and correlational. In order to measure the variables, we administered 12 assessment instruments. The ANOVAs indicate that, for all ages, girls score significantly higher in empathy, prosocial behaviour, assertive behaviour and ability for cognitive analysis of negative emotions, whereas boys present more aggressive behaviours in their interaction with peers. Furthermore, the analysis reveals that capacity for empathy does not increase between the ages of 10 and 14. Pearson coefficients suggest, for all ages, a positive association of empathy with positive social behaviours (prosocial, assertive, consideration for others), self-concept and ability to analyze the causes of negative emotions; and a negative association with negative social behaviours (aggressive, antisocial, withdrawal). *Key words:* empathy, socio-emotional development, gender, childhood-adolescence.

RESUMEN

Este estudio tiene dos objetivos: 1) explorar comparativamente la empatía y un conjunto de variables socio-emocionales en la infancia y en la adolescencia, llevando a cabo un análisis de las diferencias de género; y 2) analizar las relaciones de la empatía con la conducta social, con elección sociométrica de compañero prosocial, con autoconcepto y con capacidad para analizar emociones negativas, en ambas etapas evolutivas. La muestra está constituida por 313 participantes de 10-14 años. El estudio utiliza una metodología descriptiva y correlacional. Para medir las variables se administran 12 instrumentos de evaluación. Los ANOVAs indican que, en todas las edades, las mujeres tienen puntuaciones significativamente superiores en empatía, en conducta prosocial, en conducta asertiva y en capacidad para analizar cognitivamente emociones negativas, y los varones tienen más conductas agresivas en la interacción con iguales. La capacidad de empatía no aumenta de los 10 a los 14 años. Los coeficientes de Pearson sugieren, en todas las edades, una asociación positiva entre empatía y conductas sociales positivas (prosociales, asertivas, de consideración con los demás), autoconcepto y capacidad para analizar causas que generan emociones negativas; así como una asociación negativa con conductas sociales perturbadoras (agresivas, antisociales, de retraimiento).

Palabras Clave: empatía, desarrollo socioemocional, género, infancia-adolescencia.

Correspondence to this article should be addressed to the author: Facultad de Psicología, Universidad del País Vasco, Avenida de Tolosa 70, 20018 San Sebastián, España. E-mail: maite.garaigordobil@ehu.es. Acknowledgements: Author wants to thank all the teachers, headmasters, and students who participated in this study for their cooperation.

Empathy is currently defined from a multidimensional perspective, emphasizing the person's capacity for responding to others, taking into account both cognitive and affective aspects, and highlighting the importance of the capacity to discriminate between one's own self and that of others. Empathy includes emotional responses and vicarious experiences, in other words, the capacity for distinguishing others' affective states and the ability to take both a cognitive and affective perspective with regard to others.

Several studies have found *gender differences in empathy*, with significantly higher scores in females (Garaigordobil & García de Galdeano, 2006; Litvack, McDougall, & Romney, 1997; Lozano & Etxebarria, 2007; Mestre, Frías, & Samper, 2004; Mirón, Otero, & Luengo, 1989; Navas, Muñoz, & Graña, 2005; Sánchez, Oliva, & Parra, 2006). Nevertheless, Lafferty (2004), in a study with a sample of 12 to 14-year-olds, found that whereas girls scored significantly higher in the affective component of empathy, there were no gender differences in the cognitive component. As some researchers have argued, gender differences in empathy may decrease with increasing age. In this direction, Tobarí (2003) found significantly higher scores in girls during childhood, but that gender differences decreased in adolescence.

In the analysis of the relationships between *empathy and age*, some works have suggested that empathy increases with age (Underwood & Moore, 1982). In this same vein, Litvack *et al.* (1997) found an increase in empathy with age in a sample of children aged 8 to 11. Nevertheless, the study by Calvo, González and Martorell (2001) with children and adolescents aged 10 to 18 confirmed only increased empathy with age in girls, and the research by Mestre *et al.* (2004) with adolescents aged 13 to 18 did not reveal significant differences as a function of age either in males or females.

In general, studies have found gender differences in *prosocial behaviour*, with significantly higher scores in females (Calvo *et al.*, 2001; Etxebarria, Apodaca, Eceiza, Fuentes, & Ortiz 2003; Rotenberg *et al.*, 2005; Sánchez *et al.*, 2006). However, for antisocial behaviour, research results are ambiguous: whereas some studies have found greater frequency of *antisocial behaviours* in males (Cabrera, 2002; Calvo *et al.*, 2001; Garaigordobil, Álvarez, & Carralero, 2004), others have suggested that these differences are greater in childhood, decreasing in adolescence (Moffitt & Caspi, 2001). Some works analyzing gender differences in self-concept during adolescence have found poorer global self-concept in females (Amezcuca & Pichardo, 2000; Borders, 1998; Pastor, Balaguer, & García Merita, 2003); however, other studies have failed to find significant differences (Garaigordobil, Durá, & Pérez, 2005). Complementarily, other investigations have found gender differences in children's *emotional understanding*, with an advantage for girls (Sunew, 2004).

In the last twenty years or so, researchers have shown increasing interest in demonstrating empirically the relationships between empathy and a wide range of socio-emotional variables of children-adolescents' personality, such as social behaviour, peer acceptance or self-concept. Dispositional empathy has provided the focus for numerous studies, as a crucial variable of *prosocial behaviour*, and several correlational studies have found positive significant associations between empathy and prosocial behaviour in children and adolescents (Calvo *et al.*, 2001; Eisenberg, Miller, Shell, & McNalley, 1991; Greener, 1999; Guozhen, Li, & Shengnan, 2004; Mestre *et al.*, 2004; Sánchez *et*

al., 2006; Strayer & Roberts, 2004; Thompson, 1995). In general, research has found significant relationships between empathy and prosocial behaviour, although the review by Underwood and Moore (1982) revealed an absence of relationship between empathy and altruism in childhood, while confirming a significant association in adolescents and adults. These results led them to suggest the possibility that empathy develops with age, so that its relationships with other variables will become more stable with increasing age.

On the other hand, significant negative correlations have been found between empathy and *antisocial behaviour* in children and adolescents (Calvo *et al.*, 2001; Garaigordobil, 2005a; Garaigordobil *et al.*, 2004; Navas *et al.*, 2005), interpersonal violence in adolescents (Goodman, 1999), all types of aggression in children and adolescents (except indirect aggression at age 12) (Kaukiainen *et al.*, 1999), and *physical and verbal aggressiveness* in adolescents (Mestre *et al.*, 2004). Some researchers have found these relationships in both sexes (Calvo *et al.*, 2001; Mestre *et al.*, 2004; Miller & Eisenberg, 1988), although Mirón *et al.* (1989), in their study that found a negative correlation between empathy and antisocial behaviour, reported that antisocial male adolescents showed significantly lower levels of affective and cognitive empathy, whereas in females, these differences were significant only for the affective component of empathy and for violent antisocial behaviours.

In a prospective study, De Kemp, Overbeek, De Wied, Engels and Scholte (2007) investigated whether level of dispositional affective empathy moderated the association between parental support and antisocial behaviour in early adolescents. Higher levels of affective empathy were associated with less delinquent and aggressive behaviour. Contrary to expectations, structural equation modelling did not indicate that youths with higher levels of affective empathy were susceptible to parental support. Further analyses showed that gender moderated the association between parental support and future delinquent and aggressive behaviour. Only for girls were high levels of parental support associated with lower levels of antisocial behaviour.

Studies analyzing the relationship between empathy and *acceptance by the peer group* have shown that accepted children have a more positive orientation towards others and strong sensitivity to the distress of others (Dekovic & Gerris, 1994), and that prosocial children have higher empathy than either bullies or their victims (Warden & Mackinnon, 2003).

Finally, studies exploring the links between empathy and *self-concept* show that empathic persons have high self-concept/self-esteem (Czerniawska, 2002; Garaigordobil, Cruz, & Pérez, 2003; Kukiya, 2002). Furthermore, researchers have observed a higher probability of the development of empathy in a context where positive self-concept and feelings of competence are stimulated (Lechich, 1996).

This study has two objectives: 1) to explore comparatively empathy and a set of socio-emotional variables in late childhood (age 10-12 years) and early adolescence (12-14), analyzing gender differences in these variables at both of these developmental stages; and 2) to analyze in the two age groups the relationships between empathy and: diverse positive social behaviours (prosocial behaviours, consideration for others, self-control, leadership, and assertive behaviours); diverse negative social behaviours (passive,

aggressive, and antisocial behaviours, and withdrawal and anxiety); sociometric choice of prosocial classmate; self-concept; and capacity for analyzing negative emotions.

The study sets out nine hypotheses: 1) Girls will obtain significantly higher scores in empathy at all ages; 2) Capacity for empathy will increase with age; 3) Girls will score significantly higher in diverse types of positive social behaviours (prosocial and assertive behaviours, etc.), whereas boys will present more negative social behaviours (aggressive behaviours in peer interaction, antisocial behaviours, etc.); 4) Girls will score significantly higher in capacity for cognitive analysis of negative emotions; 5) Boys and girls will obtain similar scores in self-concept; 6) Empathy will present a positive association with social behaviours that facilitate socialization (prosocial and assertive behaviours, consideration, self-control, leadership, etc.) and a negative association with social behaviours that disrupt socialization (aggressive and antisocial behaviours, withdrawal, etc.); 7) Empathy will be positively associated with sociometric choice of prosocial classmate; 8) A positive relationship will be found between empathy and self-concept; and 9) There will be a positive association between empathy and capacity for cognitive analysis of negative emotions.

METHOD

Participants

The sample is made up of 313 participants from the province of Guipúzcoa in the Basque Country (Northern Spain), aged 10 to 14, from 12 groups or classrooms, 6 from Primary Education (aged 10-12 years) and another 6 from Secondary Education (aged 12-14 years). The apparent overlap in age (12 years) is because, actually, school level (Primary or Secondary education) was the classification criterion and there are some 12-year-olds at both levels, depending on the month when they were born. The sample of children includes 86 participants aged 10 to 11 (61.9 %) and 53 participants aged 11 to 12 (38.1%), of whom 64 are boys (46 %) and 75 are girls (54%). The sample of early adolescents includes 86 participants aged 12 to 13 (49.4 %) and 88 participants aged 13 to 14 (50.6%), of whom 96 are boys (55.2 %) and 78 are girls (44.8 %). The 12 groups comprising the sample attend 4 schools that attend generally middle-class students. Sample selection of the schools was random from all schools in the province of Guipúzcoa.

Instruments

The variables under study were measured by means of 12 assessment instruments with adequate psychometric guarantees (see Table 1). In some variables (self-assessed prosocial behaviour, assertive behaviour, antisocial behaviour and self-concept), due to the different ages of the participants, different instruments were used for measuring the same variable, while in the case of other variables (empathy, other-assessed prosocial behaviour, diverse self-assessed social behaviours, prosocial sociometric choice and ability to analyze emotions), the same instruments were used for the whole sample.

Table 1. Assessment instruments.

| Assessment instruments [age for application] | Dependent variables | Psychometric studies |
|---|---|---|
| EQ: Empathy Questionnaire (Merzbach & Epstein, 1972) [10-14] | Empathy | Cronbach's alpha = .74, Spearman-Brown = .75. Mediantional analyses: helping behaviours is a function of empathic tendency ($\beta = .31$); aggression is negatively related to empathy ($\beta = -.21$). Validity: positive relationships with empathy of Eysenck's IVE-1 ($r = .65$). |
| PBQ: Prosocial behaviour questionnaire (Weir & Duvven, 1981) [10-14] | Prosocial behaviour | Cronbach's alpha = .94. Test-retest reliability = .93. Validity: negative correlations of the PBQ with affliction and anxiety ($r = -.41$), with impositional behaviours ($r = -.40$), and with deviant behaviours ($r = -.46$), and positive correlations with sociometric scores. |
| CAI: Child Altruism Inventory (Mik & Leung, 1991) [12-14] | Prosocial behaviour | Cronbach's alpha = .70. Test-retest reliability = .70. Validity: positive correlations of the CAI with self-esteem ($r = .17$) and with classroom social climate ($r = .48$), and negative correlations with psychotestism ($r = -.33$). |
| CABS: Children's Assertiveness Behaviour Scale (Wood, Michelson, & Flynn, 1978) [10-12] | Social behaviour: Assertive (AS), aggressive (AG), passive (SU) | KR20 = .78. Test-retest reliability = .86. Factor analysis reveals a homogeneous structural factor. Discriminant validity = the instrument permits children with social skills training to be distinguished from those without. |
| AS: Assertiveness Scale (Godey <i>et al.</i> , 1993) [12-14] | | Cronbach's alpha: AS = .73, AG = .77, and SU = .66. Test-retest reliability in primary school (.83; .83; .82), and in secondary school (.73; .74; .76). |
| AD: Antisocial-Delinquent Behaviour Scale (Seitschels, 1988/1995) [10-12] | Antisocial-delinquent behaviour | Spearman-Brown = .86 in both scales. Studies of criterion validity confirm higher scores in 95 adolescents with behaviour problems, compared to 99 control adolescents, and variance analyses indicate significant differences between the two groups on the scale of antisocial behaviour, $F = 4.70, p < .01$, and on that of delinquent behaviour, $F = 2.90, p < .01$. |
| ABS: Antisocial Behavior Scale (Martorell & Silva, 1993) [12-14] | | Cronbach's alpha = .92. Test-retest reliability = .67. Criterion validity: Mean score of a group of delinquents was much higher ($M = 3.238$) than that of a non-delinquent sample ($M = 14.07$). |
| SB: Socialization battery (Silva & Martorell, 1987) [10-14] | Social Behaviours: Consideration for others, Self-control, Withdrawal, Anxiety-stress, Leadership | Cronbach's alpha: between .73 and .82 for the different scales. Validity = lower scores for delinquent youngsters in consideration and self-control, and higher scores in withdrawal. Consideration behaviours = positive relationships with empathy (.42) and negative with psychotestism (-.37). Self-control behaviours = negative correlations with antisocial behaviour (-.40) and impulsiveness (-.43). Withdrawal behaviours = negative correlations with extraversion (-.36). Leadership behaviours = positive relationships with extraversion (.27). |
| SQ: Sociometric Questionnaire: Prosocial classmate (Morero, 1934/1972) [10-14] | Prosocial classmate | Test-retest reliability = .72. Selection as prosocial person = positive correlations with consideration behaviours (.44), with self-control behaviours (.33), with leadership behaviours (.45) and with prosocial behaviours (.31). |
| LAES-C: List of adjectives for evaluation of self-concept in children aged 10 to 12 years (Carratgordobil, 2005b) [10-12] | Self-concept: positive, negative, global | Cronbach's alpha = .73. Spearman-Brown = .86. Validity = positive correlations between global self-concept in the LAES-C and self-concept in the AFA (Müstsu, Garcia & Gutierrez, 1991) (.65). |
| LAES-A: List of adjectives for evaluation of self-concept in adolescents (Carratgordobil, 2000) [12-14] | | Validity = positive correlations between self-concept/self-esteem of the AC (Martorell, Aloy, Gómez & Silva, 1993) and self-concept of the LAES-A (positive = .41; global = .33); and between total self-concept of the AC and global self-concept global of the LAES-A (.46). |
| OECAF: Questionnaire for evaluation of capacity for analyzing feelings. (Carratgordobil, 2000) [10-14] | Ability to analyze negative emotions | Cronbach's alpha = .84. Spearman-Brown = .96. Validity = positive correlations of capacity for analyzing the causes of feelings with prosocial behaviour ($r = .48$). |

EQ, Empathy Questionnaire (Mehrabian & Epstein, 1972). The EQ comprises 22 statements referring to empathic feelings that are used for measuring capacity for cognitive and emotional empathy. Respondents' task consists of indicating whether they usually do, think or feel what the statement says. For example, "seeing someone cry makes me feel like crying", "when I see someone is ill, I feel sad", and so on.

PBQ, Prosocial Behaviour Questionnaire (Weir & Duveen, 1981). The PBQ comprises 20 statements referring to a range of prosocial behaviours. For example, "if there is an argument or fight you try to stop it", "you share your sweets with your classmates", "you help other children when they feel ill", "you invite newcomers to join the game", etc. For the application, on the one hand, the participants aged 10 to 12 self-assess, and on the other, parents and teachers assess their children/pupils, reporting the frequency with which the described behaviours are observed.

CAI, Child Altruism Inventory (Ma & Leung, 1991). The CAI comprises 24 statements referring to altruistic behaviours and empathic feelings, the basis of prosocial behaviour, which are used to measure respondents' altruistic orientation. The task consists of reading each statement and indicating whether one usually does, thinks or feels what it says. For example, "I always help disabled people", "I give sweets to my friends".

CABS, Children's Assertiveness Behaviour Scale (Wood, Michelson & Flynn, 1978). The CABS assesses children's social behaviour, exploring passive, assertive or aggressive responses from the child in a range of situations of interaction with others. The situations considered relate to social skills for giving and receiving compliments, maintaining and ending conversations, requesting favours, responding to an insult, expressing positive and negative feelings and so on. The scale includes 27 items with 5 response-categories per item, varying along a continuum of passive-assertive-aggressive responses, from which children choose the one that represents their habitual way of responding to a specific situation. Assertive responses are defined as those in which participants deal with the situation by expressing what they think and feel without hurting others, behaviours that involve expressing their feelings, upholding their rights, reasoning with others and so on. In passive responses, the situation is not dealt with directly; the types of response of this category include those of inhibition (no action at all) and avoidance (fleeing from or avoiding the situation instead of dealing with it). Aggressive responses are negative behaviours for interaction, such as threats and physical and verbal aggression.

AS, Assertiveness Scale (Godoy *et al.*, 1993). The AS comprises 20 phrases describing situations of social interaction commonly occurring in the life of an adolescent, and which permit the measurement of assertive behaviour. For each one of these situations, three pairs of responses are proposed: assertive-aggressive, assertive-submissive and aggressive-submissive. The participant must choose a response from each pair. This instrument measures assertive behaviour (AS; a tendency to express oneself directly, but not coercively, in social situations), passive behaviour (SU; a tendency to respond submissively in relationships) and aggressive behaviour (AG; a tendency to express oneself in a coercive manner) in peer interaction.

AD, Antisocial-Delinquent Behaviours Questionnaire (Seisedos, 1995). This instrument comprises 40 sentences referring to different types of antisocial and delinquent

behaviour. It assesses two aspects of deviant behaviour: antisocial (entering a prohibited place, writing graffiti, breaking or throwing other people's things on the ground, fighting, hitting, or insulting and so on) and delinquent behaviour (taking drugs, stealing, obtaining money by threats, belonging to a gang that gets into fights or causes disturbances etc.). Respondents' task consists of reading the sentences and indicating whether they have performed the behaviours in question.

ABS, Antisocial Behaviour Scale (Martorell & Silva, 1993). The ABS comprises 46 items for assessing antisocial behaviour and was administered to the adolescent sample. Item content refers to behaviours such as hooliganism and the transgression of social norms related to age. The scale presents a series of activities such as breaking objects, hitting people, smoking, drinking, forging grades or school reports, playing truant, minor assault and so on. Respondents must indicate whether they have done any of these things in the previous 12 months.

SB, Socialization Battery (Silva & Martorell, 1987). By means of 75 statements, this instrument measures a range of social behaviours: consideration for others (concern for those who have problems and are rejected), leadership (initiative, self-confidence and spirit of service), self-control (close observance of rules and social norms that facilitate social harmony), withdrawal (isolation from others), and anxiety-shyness (anxiety, fear, nervousness, shyness or embarrassment in social relationships). The task consists of reading the statements and indicating whether or not the content can be applied to oneself (12-14 years) or the intensity with which it can be applied "not at all", "to some extent" or "a lot" (10-12 years). Examples of the statements are: "I help others when they have problems", "I insult people", "I am usually alone" and "I like organizing new activities".

SQ, Sociometric Questionnaire: Prosocial Classmate (Moreno, 1972). In this questionnaire, participants are presented with an open question, asking them to identify the classmates they consider to be prosocial, that is, those who help, share and collaborate with others. Analysis of the responses makes it possible to identify the children considered prosocial by their peers.

LAES-C, List of Adjectives for the Evaluation of Self-Concept in Children aged 10 to 12 years (Garaigordobil, 2005b). Comprising 60 adjectives, 40 positive and 20 negative, this instrument provides information about positive self-concept, negative self-concept and global self-concept (the difference of the two). Participants are presented with a list of adjectives and asked to mark those that define them.

LAES-A, List of Adjectives for the Evaluation of Self-Concept in Adolescents (Garaigordobil, 2000). Comprising 75 adjectives, 40 positive and 35 negative, this instrument permits assessment of the respondents' concept of themselves, specifically, positive self-concept, negative self-concept and global self-concept (the difference of the two).

QECAF, Questionnaire for Evaluation of the Capacity for Analyzing Feelings. (Garaigordobil, 2000). This is an open questionnaire that explores cognitive capacity for analyzing 4 negative emotions: sadness, envy, anger and fear. In the first part of the questionnaire, each participant must analyze the causes of these feelings, identifying all the causes or underlying factors of each emotion; in the second phase, they must

propose ways of dealing or coping with that emotion. For example, with regard to sad feelings, they suggest as causes “the death of a close friend or relative, or failing exams” and, as ways of dealing with them, “talking to friends or studying more for the next exam.” To score the test, one point is given for each answer that is appropriately content-oriented. Repeated responses do not score, and nor do responses that are incorrect from the point of view of content. A raw score is obtained for each subscale (causes and coping).

Design and Procedure

The study employed a descriptive methodology for comparing the gender differences of these 10- to 14-year-olds in the above-mentioned range of socio-emotional variables. Complementarily, a correlational methodology was employed to determine concomitant relationships between empathy and variables related to social and emotional development in late childhood and early adolescence. Twelve instruments were applied, in 6 assessment sessions carried out during the first few weeks of the school year. Administration of the instruments to the 12 different groups was carried out by the school psychologist, with the help of doctoral students. In order to standardize as far as possible the application of the instruments, the application team was trained in group-seminar format. Teachers and parents had 3 weeks to make their observations and respond to the questionnaires they were given.

RESULTS

In the analysis of the data, the means, standard deviations, and variances in empathy and in the rest of the socio-emotional variables were calculated according to gender and age (Tables 2 and 3). Subsequently, correlational analyses of empathy with the rest of the variables were carried out for both age groups (Tables 4 and 5).

Gender differences in socio-emotional variables: Empathy, social behaviour, sociometric choice, self-concept and ability to analyze emotions. The results of the MANOVA for the set of socio-emotional variables explored confirmed significant gender differences both in the children’s sample, $F(1.137) = 3.10, p < .001$, and the adolescent’s sample, $F(1.172) = 3.99, p < .001$; the effect size was large ($\eta^2 = .325; r = .57$) ($\eta^2 = .335; r = .57$).

First of all, with the aim of exploring possible gender differences in empathy, the sample as a whole was analyzed, and the results of the ANOVA revealed significant differences between boys and girls, $F(1.311) = 52.88, p < .001$, with higher scores in girls ($M = 17.05, SD = 3.07$) than in boys ($M = 14.08, SD = 3.99$). The analysis distinguishing between the two developmental levels (children, 10-12 years, and adolescents, 12-14 years) points in the same direction. In the children’s sample (see Table 2), the ANOVA revealed significant gender differences, $F(1.137) = 16.53, p < .001$, with girls scoring higher ($M = 16.77, SD = 3.71$) than boys ($M = 14.02, SD = 4.28$). In the adolescent sample (see Table 3), girls’ scores were also higher ($M = 17.07, SD = 2.42$) than those

of boys ($M= 14.14$, $SD= 3.90$), and the difference was statistically significant, $F(1.172) = 31.45$, $p < .001$. Complementarily, an analysis was carried out on changes in empathy with age, but no statistically significant differences emerged, $F(1.311) = .09$, $p > .05$. By age group, scores in empathy were very similar: for age 10 to 11 ($M= 15.64$, $SD= 4.54$), for age 11 to 12 ($M= 15.28$, $SD= 3.62$), for age 12 to 13 ($M= 15.51$, $SD= 3.05$) and for age 13 to 14 ($M= 15.58$, $SD= 4.13$). The interaction between age x gender was not statistically significant, $F(3.311)= .49$, $p > .05$.

Secondly, possible gender differences were explored for the rest of the socio-emotional variables assessed. As shown in Tables 2 and 3, for both stages -late childhood and early adolescence- statistically significant gender differences emerged in the following variables: a) prosocial behaviour (self-assessed and assessed by parents and teachers), with higher scores for girls; b) assertive and aggressive behaviours with peers, with higher scores in assertive behaviour and lower scores in aggressive behaviour in girls; and c) the ability to analyze negative emotions, with regard to both the cause of these emotions and the ways of coping with them, with girls obtaining significantly higher scores.

In antisocial behaviour, lower scores were found for girls at all ages, although these differences were only statistically significant in the children (10-12 years). In social behaviours of consideration for others and of self-control, significantly higher scores were obtained by girls, but only in the children (10-12 years), whereas in the adolescents (12-14 years), the girls scored significantly lower in withdrawal behaviours but higher in anxiety-shyness behaviours. In choice of prosocial classmate, there were significant gender differences only in the children (10-12 years), with girls being more frequently nominated as prosocial classmates. Finally, girls presented significantly higher scores in positive and global self-concept and lower scores in negative self-concept, although this difference was only significant in the children's sample (10-12 years).

In sum, girls obtained significantly higher scores at all ages in empathy, prosocial behaviour, assertive behaviour in peer interaction, and capacity for the cognitive analysis of negative emotions. In the children's sample, girls scored significantly higher in behaviours of consideration for others and self-control, were more commonly named as prosocial classmates, and presented a more positive self-concept. Likewise, at all ages, boys presented significantly more aggressive behaviours in peer interaction, and displayed more antisocial behaviours in childhood, and more withdrawal behaviours and fewer anxiety-shyness behaviours in adolescence. Thus, gender differences in antisocial behaviour, sociometric choice of prosocial classmate and self-concept decrease with age.

Relationships of empathy to social behaviour, sociometric choice, self-concept and ability to analyze emotions. With the scores from the instruments applied, and after checking the basic assumptions, Pearson correlation coefficients were obtained, yielding the results shown in Tables 4 and 5. Taking into account the gender differences, the correlations were calculated for the total sample and for both sexes separately.

As displayed in Tables 4 and 5, analysis of the total sample ($n= 313$) revealed positive correlations ($p < .05$) of empathy with the following behaviours (in all the cases, for 10-12 and 12-14-year-olds, respectively): prosocial behaviours, self-assessed

Table 2. Means, standard deviations and variance in empathy, social behaviour, self-concept, prosocial sociometric choice and ability to analyze emotions in boys and girls aged 10-12.

| Instruments and Variables | Boys (n= 64) | | Girls (n= 75) | | ANOVA F (1,137) |
|--|--------------|-------|---------------|-------|--------------------|
| | M | SD | M | SD | |
| EQ | | | | | |
| Empathy | 14.02 | 4.28 | 16.77 | 3.71 | 16.53*** |
| Prosocial behaviour | | | | | |
| PBQ. Self-assessment | 18.08 | 2.90 | 19.47 | 2.65 | 8.64** |
| PBQ. Parents | 39.49 | 9.33 | 44.01 | 8.78 | 8.37** |
| PBQ. Teachers | 34.25 | 13.97 | 43.31 | 11.08 | 18.12*** |
| CABS Social behaviours | | | | | |
| Assertive | 15.28 | 5.59 | 18.07 | 4.09 | 11.42*** |
| Aggressive | 6.22 | 5.26 | 3.55 | 3.33 | 13.16*** |
| Passive | 9.31 | 6.74 | 7.75 | 4.68 | 2.58 |
| AD | | | | | |
| Antisocial behaviour | 4.42 | 3.50 | 2.64 | 2.65 | 11.56*** |
| SB. Social Behaviours | | | | | |
| Consideration for others | 26.58 | 7.23 | 30.44 | 6.33 | 11.26*** |
| Self-control | 28.98 | 5.33 | 31.44 | 5.78 | 6.68** |
| Withdrawal | 7.36 | 5.70 | 5.87 | 5.35 | 2.52 |
| Anxiety-shyness | 9.09 | 5.02 | 8.71 | 4.68 | 0.21 |
| Leadership | 16.75 | 5.75 | 16.71 | 4.94 | 0.00 |
| SQ | | | | | |
| Prosocial classmate | 2.59 | 2.67 | 4.77 | 3.43 | 16.96*** |
| LAES-C. Self-concept | | | | | |
| Positive | 25.50 | 8.56 | 29.47 | 6.59 | 9.50** |
| Negative | 4.05 | 4.59 | 2.53 | 2.07 | 6.57** |
| Global | 21.45 | 9.59 | 26.93 | 7.04 | 15.00*** |
| QECAF. Capacity for analyzing feelings | | | | | |
| Causes | 5.69 | 2.07 | 7.17 | 2.97 | 11.27*** |
| Coping | 3.63 | 1.59 | 4.49 | 2.36 | 6.21* |

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

($r = .53$, $r = .52$,) and assessed by parents ($r = .28$, $r = .27$), assertive behaviours in peer interaction ($r = .55$, $r = .32$), social behaviours of consideration for others ($r = .46$, $r = .26$), sociometric choice of prosocial classmate (only as a trend in the adolescents) ($r = .28$, $r = .14$), positive self-concept ($r = .48$, $r = .21$), global self-concept ($r = .50$, $r = .19$) and capacity for identifying the causes of negative emotions ($r = .27$, $r = .16$). Likewise, significant negative correlations ($p < .05$) of empathy were found with aggressive behaviours in peer interaction ($r = -.50$, $r = -.27$), antisocial behaviours ($r = -.31$, $r = -.16$) and withdrawal behaviours ($r = -.24$, $r = -.29$).

As can be seen in Table 4, which shows the correlations obtained with the children's sample (10 to 12 years), the relationships between empathy and the rest of the variables clearly differed as a function of gender. Thus, *girls with high empathy* were significantly more likely to present many positive social behaviours (self-, parent- and teacher-assessed prosocial and assertive behaviours, consideration, self-control and leadership) and few negative social behaviours (aggressive and passive behaviours and withdrawal-social isolation). Furthermore, girls with high capacity for empathy were considered prosocial by their classmates, they had a high positive global self-concept and reported many causes or factors underlying negative emotions. *Empathic boys* were

Table 3. Means, standard deviations and variance in empathy, social behaviour, self-concept, prosocial sociometric choice and ability to analyze emotions in boys and girls aged 12-14.

| Instruments and Variables | Boys (n= 96) | | Girls (n= 78) | | ANOVA F (1, 172) |
|--|--------------|-------|---------------|-------|---------------------|
| | M | SD | M | SD | |
| EQ | | | | | |
| Empathy | 14.14 | 3.90 | 17.07 | 2.42 | 31.45*** |
| Prosocial behaviour | | | | | |
| CAI. Self-assessment | 17.26 | 3.32 | 18.69 | 2.36 | 9.57** |
| PBQ. Parents | 40.43 | 9.86 | 44.03 | 9.47 | 5.53* |
| PBQ. Teachers | 35.02 | 11.17 | 41.41 | 10.39 | 13.96*** |
| AS Social behaviours | | | | | |
| Assertive | 31.86 | 4.69 | 33.58 | 3.21 | 7.10** |
| Aggressive | 11.83 | 5.25 | 9.70 | 4.20 | 7.88** |
| Passive | 16.15 | 3.89 | 16.85 | 3.95 | 1.29 |
| ABS | | | | | |
| Antisocial behaviour | 8.92 | 5.82 | 8.14 | 5.19 | 0.80 |
| SB. Social Behaviours | | | | | |
| Consideration for others | 12.36 | 1.97 | 12.70 | 1.25 | 1.62 |
| Self-control | 10.48 | 2.59 | 10.22 | 2.43 | 0.43 |
| Withdrawal | 0.97 | 1.48 | 0.47 | 0.83 | 6.42* |
| Anxiety-shyness | 3.36 | 2.41 | 4.31 | 2.85 | 5.23* |
| Leadership | 5.65 | 2.11 | 5.42 | 2.30 | 0.43 |
| SQ | | | | | |
| Prosocial classmate | 7.53 | 4.20 | 7.59 | 4.06 | 0.00 |
| LAES-A. Self-concept | | | | | |
| Positive | 22.24 | 6.97 | 22.97 | 6.29 | 0.48 |
| Negative | 6.82 | 4.30 | 7.38 | 4.25 | 0.68 |
| Global | 15.42 | 7.34 | 15.59 | 7.06 | 0.02 |
| QECAF. Capacity for analyzing feelings | | | | | |
| Causes | 9.22 | 2.90 | 10.07 | 3.02 | 3.32* |
| Coping | 5.23 | 2.27 | 6.31 | 2.71 | 7.61** |

* $p < .09$; * $p < .05$; ** $p < .01$; *** $p < .001$

significantly more likely to present many positive social behaviours (self-assessed prosocial and assertive behaviours, consideration for others, self-control, leadership) and few negative social behaviours (antisocial and peer-directed aggressive and passive behaviours), and they had a high positive-global self-concept. The results obtained with the children's sample ($n = 139$) confirmed that *boys and girls with high empathy* were more liable to present many positive social behaviours (prosocial and assertive behaviours, consideration for others, self-control, leadership) and few negative social behaviours (withdrawal, aggressive, passive and antisocial behaviours), were considered prosocial by their classmates, showed high positive-global self-concept and low negative self-concept, and reported many causes of negative emotions, as well as ways of coping with those emotions.

As regards the correlations found for the adolescent group (12-14 years), the results shown in Table 5 indicate that *empathic girls* were significantly more likely to present many positive social behaviours (self-assessed prosocial behaviour and consideration); whereas *empathic boys* appeared to present many positive social behaviours (self- and parent-assessed prosocial behaviours, assertive behaviours, consideration for others, and leadership) and few aggressive and withdrawal behaviours, they were fairly

Table 4. Pearson correlations between empathy and social behaviour, prosocial sociometric choice, self-concept and ability to analyze emotions in children aged 10-12.

| Instruments and Variables | Empathy Total (n= 139) | Empathy Boys (n= 64) | Empathy Girls (n= 75) |
|--|------------------------------|----------------------------|-----------------------------|
| Prosocial behaviour | | | |
| PBQ. Self-assessment | .53*** | .57*** | .40*** |
| PBQ. Parents | .28*** | .19 | .24* |
| PBQ. Teachers | .22** | -.01 | .29* |
| CABS Social behaviours | | | |
| Assertive | .55*** | .55*** | .46*** |
| Aggressive | -.50*** | -.47*** | -.44*** |
| Passive | -.40*** | -.44*** | -.30** |
| AD | | | |
| Antisocial behaviour | -.31*** | -.37** | -.09 |
| SB. Social Behaviours | | | |
| Consideration for others | .46*** | .41*** | .39*** |
| Self-control | .43*** | .46*** | .34** |
| Withdrawal | -.24** | -.12 | -.30** |
| Anxiety-shyness | -.04 | -.02 | -.10 |
| Leadership | .22** | .20 | .28** |
| SQ | | | |
| Prosocial classmate | .28*** | .09 | .28** |
| LAES-C. Self-concept | | | |
| Positive | .48*** | .42*** | .45*** |
| Negative | -.17* | -.09 | -.18 |
| Global | .50*** | .42*** | .48*** |
| QECAF. Capacity for analyzing feelings | | | |
| Causes | .27*** | .07 | .39*** |
| Coping | .16* | .00 | .18 |

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

frequently judged prosocial by their classmates, and had a high positive-global self-concept. On analyzing the adolescent sample ($n = 174$), it was observed that *empathic adolescents* were significantly more likely to display many positive social behaviours (self- and parent-assessed prosocial behaviours, assertive behaviours and consideration for others) and few negative social behaviours (aggressive, antisocial and withdrawal behaviours). Moreover, they were considered prosocial classmates by their group (at least, there was a trend towards this), they had a high positive-global self-concept and showed high capacity for analyzing the causes of negative emotions.

DISCUSSION

This work had the following goals: a) to explore comparatively empathy and a set of socio-emotional variables in late childhood (age 10-12 years) and in early adolescence (12-14), analyzing gender differences in these variables at both of these developmental stages; and b) to analyze in the two age groups the relationships between empathy and diverse social behaviours, sociometric choice of prosocial classmate, self-concept and capacity for analyzing negative emotions.

In this study, statistically significant gender differences were found in capacity for empathy, with girls scoring higher at all ages. These results, in accordance with those of other research (Garaigordobil & García de Galdeano, 2006; Litvack *et al.*, 1997; Lozano & Etxeberria, 2007; Mestre *et al.*, 2004; Mirón *et al.*, 1989; Navas *et al.*, 2005; Sánchez *et al.*, 2006), indicate greater empathic disposition in girls, confirming Hypothesis 1. As Mirón *et al.* (1989) contend, these differences may be attributable to divergences in the rearing patterns of boys and girls. Thus, it can be assumed that girls, to a greater extent than boys, have been socialized in a way that favours the development of skills oriented towards warmth in interpersonal relationships. That is, the capacity for understanding and sharing others' feelings and emotions would be a characteristic associated with the feminine role, more than with the stereotype of the masculine role.

As far as empathy in relation to development is concerned, no significant differences were found for empathy from age 10 to age 14, with very similar scores recorded for all the age groups. These results refute Hypothesis 2, which postulated an increase with age in the capacity for empathy, and point in the same direction as those obtained in the study by Mestre *et al.* (2004), who found no differences from age 13 to age 18. However, the present data are at odds with the observations of Underwood and Moore (1982), who suggested an increase in empathy as children got older, and with the results of other studies that have found an increase in empathy from age 8 to age 11

Table 5. Pearson correlations between empathy and social behaviour, prosocial socio-metric choice, self-concept and ability to analyze emotions in children aged 12-14.

| Instruments and Variables | Empathy Total (n = 174) | Empathy Boys (n = 96) | Empathy Girls (n = 78) |
|--|-------------------------------|-----------------------------|------------------------------|
| Prosocial behaviour | | | |
| CAI. Self-assessment | .52*** | .48*** | .45*** |
| PBQ. Parents | .27*** | .28** | .11 |
| PBQ. Teachers | .13 ⁺ | .04 | .11 |
| AS Social behaviours | | | |
| Assertive | .32*** | .30** | .17 |
| Aggressive | -.27*** | -.31** | -.01 |
| Passive | -.00 | -.00 | -.16 |
| ABS | | | |
| Antisocial behaviour | -.16* | -.17 ⁺ | -.06 |
| SB. Social Behaviours | | | |
| Consideration for others | .26*** | .24* | .24* |
| Self-control | .01 | .01 | .02 |
| Withdrawal | -.29*** | -.24* | -.17 |
| Anxiety-shyness | .14 ⁺ | .16 ⁺ | .07 |
| Leadership | .10 | .22* | .00 |
| SQ | | | |
| Prosocial classmate | .14 ⁺ | .27** | .12 |
| LAES-A. Self-concept | | | |
| Positive | .21** | .22* | .18 |
| Negative | -.01 | -.03 | -.01 |
| Global | .19** | .23* | .15 |
| QECAF. Capacity for analyzing feelings | | | |
| Causes | .16* | .11 | .09 |
| Coping | .09 | .00 | .02 |

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

(Litvack *et al.*, 1997), or from age 10 to age 18, although only in girls in this latter case (Calvo *et al.*, 2001). The differences in the results obtained in the studies may be partially due to the assessment instruments employed and also to be variability of the ages of the samples. The results suggest the need of: 1) carrying out a revision of the assessment instruments of empathy, because not all of them measure the same dimensions of empathy; 2) systematize a tool with guarantee of proven reliability and validity with samples from different countries and with versions adapted to different age levels; 3) administer the tool from early infancy until the end of adolescence with multicultural samples; and 4) carry out a developmental analysis of empathy, exploring whether there are changes as a function of age, comparing the changes in the diverse cultures.

The results of the analysis as a function of gender revealed that girls of all ages obtained significantly higher scores in prosocial behaviour and assertive behaviour in interaction with peers and the capacity for the cognitive analysis of negative emotions. In childhood, girls scored significantly higher in behaviours of consideration for others and self-control, were more often nominated as prosocial classmates, and presented a more positive self-concept. Boys, on the other hand, presented significantly more aggressive behaviours in peer interaction at all ages, more antisocial behaviours in childhood, and more withdrawal behaviours and fewer anxiety-shyness behaviours in adolescence.

Hypothesis 3 postulated that girls would present more positive social behaviours and fewer negative social behaviours than boys. Consequently, Hypothesis 3 is only partially confirmed, because during adolescence, there are no differences between boys and girls in antisocial behaviour, nor are there differences in the behaviours of consideration and self-control, or in sociometric scores; Moreover, adolescent girls present significantly higher anxiety-shyness scores than do boys.

Hypothesis 4, which proposed that girls would show greater ability to analyze emotions, is also confirmed. These results support those obtained in studies that found girls to score significantly higher in prosocial behaviour (Calvo *et al.*, 2001, Etxebarria *et al.*, 2003; Rotenberg *et al.*, 2005) and emotional understanding (Sunew, 2004). However, as regards antisocial behaviour, whereas significant differences were found in childhood, with boys scoring higher, such differences were not confirmed in adolescence, and this points in the direction of the findings of Moffitt and Caspi (2001), who suggested that differences in antisocial behaviour are greater in childhood and decrease in adolescence.

With regard to Hypothesis 5, which postulated similar scores in self-concept in both sexes, the hypothesis is partially confirmed, as significantly higher scores were obtained for girls, but only in the children's sample. These data support those obtained in other studies with adolescents, which found no significant gender differences (Garaigordobil *et al.*, 2005), but are at variance with others that found poorer global self-concept in girls (Amezcuca & Pichardo, 2000; Borders, 1998; Pastor *et al.*, 2003). Such discrepancies may be due to the assessment instruments used, as some emphasize the corporal dimension of self-concept and, in this dimension, adolescents girls tend to score lower.

The results of the correlational analyses carried out confirm that empathic children and adolescents presented many positive social behaviours and few negative social behaviours. These data support Hypothesis 6, which postulated that empathy would

show a positive association with social behaviours that facilitate socialization and a negative association with those that disrupt socialization, and are in the same line as those of studies that have found positive relationships between empathy and prosocial behaviours (Calvo *et al.*, 2001; Eisenberg *et al.*, 1991; Greener, 1999; Guozhen *et al.*, 2004; Mestre *et al.*, 2004; Sánchez *et al.*, 2006; Strayer & Roberts, 2004; Thompson, 1995), and with those that have found negative relationships of empathy with aggressive behaviour (De Kemp *et al.*, 2007; Kaukiainen *et al.*, 1999; Mestre *et al.*, 2004; Miller & Eisenberg, 1988), interpersonal violence during adolescence (Goodman, 1999) and antisocial behaviour (Calvo *et al.*, 2001; Garaigordobil, 2005a; Garaigordobil *et al.*, 2004; Mirón *et al.*, 1989; Navas *et al.*, 2005). On the other hand, they contradict the results of Underwood and Moore (1982), who found no association between empathy and altruism in children. This discrepancy may be attributable to the different instruments used for assessing empathy, because, as Eisenberg and Miller (1987) point out, different assessment methods may affect the strength of the relationships between the two constructs.

In relation to Hypothesis 7, it was found in the present study that empathic children and adolescents were, in general, considered prosocial by their classmates, thus ratifying this hypothesis. Nevertheless, it is observed that the relation between empathy and prosocial consideration by classmates could depend on the age group, because in the 10-12-year-old group, the correlation was significant for the girls but not for the boys, but in the 12-14-year-old group, the correlation was significant for the boys but not for the girls. These data are in accordance with those obtained in previous work that has revealed positive relationships between peer acceptance and empathy (Dekovic & Gerris, 1994; Warden & Mackinnon, 2003).

Moreover, the study found empathic children and adolescents to have high self-concept (positive and global), thus confirming Hypothesis 8, which proposed a positive association between empathy and self-concept, validating the results obtained elsewhere (Czerniawska, 2002; Garaigordobil *et al.*, 2003; Kukiyaama, 2002; Lechich, 1996). Nevertheless, no relation between self-concept and empathy was found in the group of adolescent girls.

Finally, the present data suggest that children and adolescents with high levels of empathy had a high ability to identify causes or factors underlying negative emotions, as well as high capacity (though only in childhood) for proposing ways of dealing or coping with these emotions. These results constitute a partial ratification of Hypothesis 9, which postulated positive relationships of empathy with the capacity for the cognitive analysis of negative emotions; the confirmation is only partial due to the lack of a positive association between empathy and ways of dealing with negative emotions in adolescents.

The research reported here highlights the fact that empathy is an important factor in the process through which the individual develops both the patterns of thinking and behaviour in accordance with social norms, and the connections of empathy to a highly relevant structural personality construct such as self-concept. Empathy appears to be closely related to antisocial behaviour in boys and to prosocial behaviour in both sexes, and is crucial to understanding social behaviour. In the same line of reflection as that discussed by Mestre, Samper and Frías (2002), the data obtained lead to the suggestion

that the inhibition of aggressiveness may be promoted through the development of prosociality, which includes empathy as a significant determining factor. Consequently, this work has implications from the perspective of psychological intervention in rearing and educational contexts, and underlines the importance of interventions aimed at promoting empathy as an instrument of development of the infant-juvenile personality. Thus, it is important to foster children's empathy in the socialization process: stimulating the progressive widening of their egocentric focus through presentation of the perspective of others' feelings, through the use of reasoning as a rearing and educational technique, and encouraging an understanding of the consequences of one's behaviour for others, through exposure to empathic models.

A limitation of this study resides in the correlational nature of the data, which precludes the inference of possible causal relationships between the variables examined. Hence, the need to analyze this construct with an experimental research methodology and through longitudinal studies. Furthermore, empathy was assessed by means of self-report, with the bias of social desirability that this implies. It would therefore be advisable to measure this variable with other types of assessment instruments, which would permit ratification of the data obtained.

REFERENCES

- Amezcuca JA, & Pichardo C (2000). Diferencias de género en autoconcepto en sujetos adolescentes. *Anales de psicología*, 16, 207-214.
- Borders MJ (1998). *Gender differences in the self-esteem levels of adolescent students*. Dissertation Abstracts International Section A: Humanities and Social Sciences, 58 (8-A), 3075.
- Cabrera O (2002). *Psychological and behavioral correlates of adolescent gang involvement*. Dissertation Abstracts International: Section B: The Sciences and Engineering, 62 (11-B), 5405.
- Calvo AJ, González R, & Martorell MC (2001). Variables relacionadas con la conducta prosocial en la infancia y adolescencia: personalidad, autoconcepto y género. *Infancia y Aprendizaje*, 24, 95-111.
- Czerniawska M (2002). The empathy and value system. *Przegląd Psychologiczny*, 45, 7-18.
- Dekovic M, & Gerris JRM (1994). Developmental analysis of social cognitive and behavioral differences between popular and rejected children. *Journal of Applied Developmental Psychology*, 15, 367-386.
- De Kemp R, Overbeek G, De Wied M, Engels R, & Scholte R (2007). Early adolescent empathy, parental support, and antisocial behavior. *Journal of Genetic Psychology*, 168, 5-18.
- Eisenberg N, & Miller PA (1987). The relation of empathy to prosocial and related behaviors. *Psychological Bulletin*, 101, 91-119.
- Eisenberg N, Miller PA, Shell R, & McNalley S (1991). Prosocial development in adolescence: A longitudinal study. *Developmental Psychology*, 27, 849-857.
- Ettxebarria I, Apodaca P, Eceiza A, Fuentes MJ, & Ortiz MJ (2003). Diferencias de género en emociones y en conducta social en la edad escolar. *Infancia y Aprendizaje*, 26, 147-161.
- Garaigordobil M (2000). *Intervención psicológica con adolescentes: Un programa para el desarrollo de la personalidad y la educación en derechos humanos*. Madrid: Pirámide.
- Garaigordobil M (2005a). Conducta antisocial durante la adolescencia: correlatos socio-emocionales,

predictores y diferencias de género. *Psicología Conductual*, 13, 197-215.

- Garaigordobil M (2005b). *Diseño y evaluación de un programa de intervención socioemocional para promover la conducta prosocial y prevenir la violencia*. Madrid: Ministerio de Educación y Ciencia.
- Garaigordobil M, Álvarez Z, & Carralero V (2004). Conducta antisocial en niños de 10 a 12 años: Factores de personalidad asociados y variables predictoras. *Análisis y Modificación de Conducta*, 30, 241-271.
- Garaigordobil M, Cruz S, & Pérez JI (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, Durá A, & Pérez JI (2005). Psychopathological symptoms, behavioural problems, and self-concept/self-esteem: A study with adolescents from 14 to 17 years. *Annuary of Clinical and Health Psychology*, 1, 53-63.
- Garaigordobil M, & García de Galdeano P (2006). Empatía en niños de 10 a 12 años. *Psicothema*, 18, 180-186.
- Goodman G (1999). *The relationship among affect integration, emotion-engaged coping, empathy, and interpersonal violence in adolescents*. Dissertation Abstracts International: Section B: The Sciences and Engineering, 59(7-B), 3753.
- Godoy A, Gavino A, Blanco JM, Martorell MC, Navarro AM, & Silva F (1993). EA. Escala de asertividad. In F Silva and MC Martorell (Eds.), *EPIJ. Evaluación Infanto-Juvenil* (pp. 141-174). Madrid: MEPSA.
- Greener SH (1999). *The relationship between emotional predispositions, emotional decoding and regulation skills and children's prosocial behavior*. Dissertation Abstracts International: The Sciences and Engineering, 59(8-B), 4509.
- Guozhen C, Li W, & Shengnan L (2004). A research on moral empathy, trend of helping behavior and their relations among children aged 6-12 in China. *Psychological Science*, 27, 781-785.
- Kaukiainen A, Bjoerkqvist K, Lagerspetz K, Oesterman K, Salmivalli C, Rothberg S, & Ahlbom A (1999). The relationships between social intelligence, empathy, and three types of aggression. *Aggressive Behavior*, 25, 81-89.
- Kukiyama K (2002). Relationship between emotional competence and social information processing: An application to assertion behavior. *Japanese Journal of Counseling Science*, 35, 66-75.
- Lafferty J (2004). *The relationships between gender, empathy, and aggressive behaviours among early adolescents*. Dissertation Abstracts International: Section B: The Sciences and Engineering, 64(12-B), 6377.
- Lechich ML (1996). Empathy and its importance in long-term home health care. *Journal of Long Term Home Health Care: The PRIDE Institute Journal*, 15, 15-23.
- Litvack MW, Mcdougall D, & Romney DM (1997). The structure of empathy during middle childhood and its relationship to prosocial behavior. *Genetic, Social, and General Psychology Monographs*, 123, 303-324.
- Lozano AM, & Etxebarria I (2005). La tolerancia a la diversidad en los adolescentes y su relación con la autoestima, la empatía y el concepto del ser humano. *Infancia y Aprendizaje*, 30, 109-129
- Ma HK, & Leung MC (1991). Altruistic orientation in children: Construction and validation of the Child Altruism Inventory. *International Journal of Psychology*, 26, 745-759.
- Martorell MC, Aloy M, Gómez, O, & Silva F (1993). AC. Escala de autoconcepto. In F Silva and MC

- Martorell (Eds.), *EPIJ. Evaluación Infanto-Juvenil* (pp. 25-53). Madrid: MEPSA
- Martorell MC, & Silva F (1993). ASB. Escala de conducta antisocial. In F Silva and MC Martorell (Eds.), *EPIJ. Evaluación Infanto-Juvenil* (pp. 83-110). Madrid: MEPSA.
- Mehrabian A, & Epstein N (1972). A measure of emotional empathy. *Journal of Personality*, 40, 525-543.
- Mestre MV, Samper P, & Frías MD (2002). Procesos cognitivos y emocionales predictores de la conducta prosocial y agresiva: La empatía como factor modulador. *Psicothema*, 14, 227-232.
- Mestre MV, Frías MD, & Samper P (2004). La medida de la empatía: análisis del Interpersonal Reactivity Index. *Psicothema*, 16, 255-260.
- Miller PA, & Eisenberg N (1988). The relation of empathy to aggressive and externalizing/antisocial behavior. *Psychological Bulletin*, 103, 324-344.
- Mirón L, Otero JM, & Luengo A (1989). Empatía y conducta antisocial. *Análisis y Modificación de Conducta*, 15, 239-254.
- Moffitt TE, & Caspi A (2001). Childhood predictors differentiate life-course persistent and adolescence-limited antisocial pathways among males and females. *Development and Psychopathology*, 13, 355-375.
- Moreno JL (1972). *Fundamentos de la sociometría*. Buenos Aires: Paidós.
- Musitu G, García F, & Gutiérrez M (1991). AFA. *Autoconcepto*. Madrid: TEA.
- Navas E, Muñoz JJ, & Graña JL (2005). Influencia del género, edad y conducta antisocial en variables de personalidad. *Revista de Psiquiatría de la Facultad de Medicina de Barcelona*, 32, 57-64.
- Rotenberg KJ, Fox C, Green S, Ruderman L, Slater K, Stevens K, & Carlo G (2005). Construction and validation of a children's interpersonal trust belief scale. *British Journal of Developmental Psychology*, 23, 271-292.
- Pastor Y, Balaguer I, & García Merita ML (2003). El autoconcepto y la autoestima en la adolescencia media: análisis diferencial por curso y género. *Revista de Psicología Social*, 18, 141-159.
- Sánchez I, Oliva A, & Parra A (2006). Empatía y conducta prosocial durante la adolescencia. *Revista de Psicología Social*, 21, 259-271.
- Seisdedos N (1995). *AD. Cuestionario de conductas antisociales-delictivas*. Madrid: TEA.
- Silva F, & Martorell MC (1987). *BAS 3. Batería de Socialización*. Madrid: TEA.
- Strayer J, & Roberts W (2004). Empathy and observed anger and aggression in five-year-olds. *Social Development*, 13, 1-13.
- Sunew EY (2004). *Emotional intelligence in school-aged children: Relations to early maternal depression and cognitive functioning*. Dissertation Abstracts International: Section B: The Sciences and Engineering, 65(4-B), 2116
- Tobari M (2003). The development of empathy in adolescence: A multidimensional view. *Japanese Journal of Developmental Psychology*, 14, 136-148.
- Thompson MW (1995). *Relationship between prosocial orientation and prosocial behavior of preschoolers*. Dissertation Abstracts International: Humanities and Social Sciences, 55(10-A), 3145.
- Underwood B, & Moore B (1982). Perspective-taking and altruism. *Psychological Bulletin*, 91, 143-173.
- Weir K, & Duveen G (1981). Further development and validation of the prosocial behaviour questionnaire for use by teachers. *Journal of Child Psychology and Psychiatry*, 22, 357-374.
- Warden D, & Mackinnon S (2003). Prosocial children, bullies and victims: An investigation of their

sociometric status, empathy and social problem-solving strategies. *British Journal of Developmental Psychology*, 21, 367-385.

Wood R, Michelson L, & Flynn J (1978). *Assessment of assertive behavior in elementary school children*. Paper presented at the Annual Meeting of the Association for Advancement of Behavior Therapy, Chicago.

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