

Emotional basis of gender differences in adolescent self-esteem

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Abstract: Lower self-esteem in adolescent girls than boys confers greater vulnerability to numerous risks in their development towards social adulthood. This research aimed to study the role of perceived emotional intelligence in self-esteem's gender differences. An anonymous questionnaire was applied to 1791 Spanish adolescents aged between 12 and 17 years old, composed of the Rosenberg self-esteem scale and a reduced version of the Trait Meta-Mood Scale. The results showed that girls presented lower overall self-esteem than boys, as well as lower perceived emotional intelligence. On the one hand, it was found that high perceived emotional attention was related to lower self-esteem in girls; on the other hand, results detected that high perceived emotional attention was linked to higher perceived emotional clarity and repair in boys, which were associated with higher self-esteem. These results suggest the need to design programmes to improve self-esteem in adolescent girls by reducing perceived emotional attention.

Keywords: *Trait emotional intelligence; Meta-mood; Self-esteem; Adolescence; Gender.*

Base emocional das diferenças de género na auto-estima dos adolescentes: Uma menor auto-estima em raparigas confere uma maior vulnerabilidade a diversos riscos no desenvolvimento e transição para a idade adulta, comparativamente aos rapazes. Este estudo teve como objetivo estudar o papel da inteligência emocional percebida nas diferenças de género na auto-estima. Foi aplicado um questionário anónimo a 1791 adolescentes espanhóis com idade entre 12 e 17 anos, incluindo a escala de auto-estima de Rosenberg e uma versão reduzida da escala Trait Meta-Mood de inteligência emocional percebida. Os resultados mostram que as raparigas apresentam menor auto-estima geral do que rapazes, bem como menor inteligência emocional percebida. Os resultados constataam que a elevada atenção emocional percebida, nas raparigas, se relaciona com auto-estima mais baixa, enquanto, nos rapazes, se associa a uma maior percepção de clareza emocional e reparação, ambas associadas a uma auto-estima mais elevada. Estes resultados sugerem a necessidade de elaborar programas para melhorar a auto-estima na população feminina, através da redução da atenção emocional percebida.

Palavras-chave: *Inteligência emocional percebida; Percepção emocional; Auto-estima; Adolescência; Género.*

Overall self-esteem is an affective self-assessment which expresses a judgement of self-value and self-acceptance (Baumeister, 1998; Harter, 1993). Rosenberg (1965) defined overall self-esteem as a favourable or unfavourable attitude toward the self, so that a high self-esteem means a feeling that one is worthy and has a positive assessment of one's own value as a person. For boys and girls, adolescence, as a stage of transition between childhood and social adulthood, involves coping with some physical, psychological and contextual changes and challenges, which would help them to advance in their abilities as apprentice adults (Steinberg & Morris, 2001). Literature has well documented that self-esteem plays a central role in adolescent psychological adjustment and acts as a driving force for a positive development (Harter, 1999). However, a decrease in self-esteem (Robins et al., 2002) and a greater instability (Birkeland, Melkevik, Holsen, & Wold, 2012) were detected during this transitional life stage. A positive self-esteem was linked to a lower frequency of risky behaviours (Kavas, 2009; McKay, Sumnall, Cole, & Percy, 2012) and better school adjustment (Marsh & O'Mara, 2008). Additionally, some studies observed that high self-esteem was associated with better mental health, i.e. greater satisfaction with life (Proctor, Linley, & Maltby, 2009) and lower level of anxious and depressive symptoms during adolescence (de Jong, Sportel, de Hullu, & Nauta, 2012; Orth, Robins, & Roberts, 2008). Moreover, a low self-esteem during

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adolescence has been found to be prospectively related to more depressive and anxious symptoms (Sowislo & Orth, 2013; Steiger, Allemand, Robins, & Fend, 2014) in adulthood, as well as associated with poor health, criminal behaviour and limited economic prospects (Trzesniewski et al., 2006).

Gender differences in adolescent self-esteem

The presence of possible gender differences in self-esteem during adolescence proves to be particularly relevant, because it might place one of the genders in a position of greater vulnerability, not only in adolescence but also in subsequent adulthood (Birkeland et al., 2012). Most studies to date have found that girls present lower self-esteem than boys (Bachman et al., 2011; Kling, Hyde, Showers, & Buswell, 1999; Major, Barr, Zubeck, & Babey, 1999; Twenge & Campbell, 2001). Recently, Bleidorn et al. (2015) have conducted a cross-cultural study in 48 countries and consistently observed these gender differences in self-esteem. As a consequence, a lower self-esteem in adolescent girls would hinder their ability to cope with challenges to reach social adulthood, and would be a significant risk factor for the development of internalising problems (Lee & Hankin, 2009). Moreover, Moksnes and Espnes (2012) indicated that lower self-esteem was more strongly related to depression in girls than boys, which underlines the more negative consequences of low self-esteem in adolescent girls. Some researchers tried to provide an explanation for these differences, by studying possible mechanisms, such as maturational changes associated with puberty or social-contextual variables (Robins & Trzesniewski, 2005). Polce-Lynch, Myers, Kliewer and Kilmartin (2001) pointed out that girls reported lower self-esteem partly due to greater emotional expression, more media influence and worse body image than boys. However, to our knowledge no study has examined the role of emotional intelligence in these gender differences. The role of emotional intelligence (EI) in psychological adjustment and coping with daily events during adolescence has been documented by literature (Fernández-Berrocal, Alcaide, Extremera, & Pizarro, 2006). A greater EI can facilitate the appropriate acceptance of changes that take place during adolescence, and allow to overcome the personal challenges in the process of becoming socially adult (Zeman, Cassano, Perry-Parrish, & Stegall, 2006). The present study aims to analyze the role of EI in gender differences in self-esteem in adolescence.

Perceived emotional intelligence and self-esteem

In the study of EI, Petrides (2011) differentiated trait EI and ability EI, according to the operationalization of the construct (Petrides, Pita, & Kokkinaki, 2007). Trait EI or trait emotional self-efficacy is measured through self-reports and refers to emotion-related self-perceptions and dispositions in the lower levels of personality hierarchies, whereas ability EI is evaluated via maximum-performance tests and is defined as the actual emotion-related abilities. Trait EI was found to be more related to psychological adjustment than ability EI, as indicated by a recent meta-analysis (Martins, Ramalho, & Morin, 2010). Ciarrochi, Deane and Anderson (2002) indicated that trait EI moderates the relationship between stress and mental health. High trait EI was associated with better psychological adjustment, through an improvement in active coping (Davis & Humphrey, 2012), and presented a protective role by minimizing mood deterioration in stressful situations (Mikolajczak, Petrides, Coumans, & Luminet, 2009). Schutte et al. (2002) concluded that individuals with high trait EI use their ability to adaptively regulate emotions to resist situational threats, which was related to a lower decrease in positive affect and self-esteem after a negative emotional state. Cheung, Cheung and Hue (2015a) have recently pointed out that trait EI determines the level of self-esteem by improving social competence and academic achievement. Consequently, those adolescents with high EI are more likely to perceive a greater sense of their worth (Kong, Zhao, & You, 2012).

Although many instruments have been developed to assess trait EI, the Trait Meta-Mood Scale (TMMS) has received great empirical support and a clear theoretical framework has been provided. Salovey, Mayer, Goldman, Turvey and Palfai (1995) developed this self-report measure to assess individual differences in what they named perceived EI. Perceived EI was conceived as the knowledge that individuals have of their own emotional skills (Salovey and Mayer, 1990). Following the model of Mayer and Salovey (1997), perceived EI is composed of three specific perceived emotional skills: perceived emotional attention, perceived emotional clarity and perceived emotional repair. Considering these three skills in emotion regulation, an adolescent with high perceived EI is characterised by a moderate perceived emotional attention, a high perceived emotional clarity and a high perceived ability to repair negative emotions (Salovey et al., 1995). Moreover, high perceived EI has been associated with a greater psychological adjustment during adolescence (Gómez-Baya, Mendoza, & Paino, 2016; Salovey, Woolery, Stroud & Epel, 2002). Regarding self-esteem, Rey, Extremera and Pena (2011) found that self-esteem was positively associated with perceived emotional clarity and repair, and negatively to perceived emotional attention. Specifically, Flores and Oliva (2015) detected that perceived emotional repair

showed the greater association with self-esteem. Therefore, in the present research, we want to analyze the role of each perceived emotional skill in adolescent self-esteem.

Current study

Paradoxical gender differences have been documented in EI. Whereas girls were found to present higher ability EI than boys (Salguero, Extremera, & Fernandez-Berrocal, 2012; Rivers et al., 2012), girls reported lower perceived EI than boys (Petrides & Furnham, 2000). Specifically, using TMMS, girls reported greater perceived emotional attention than boys, whereas boys indicated greater perceived emotional clarity and repair than girls (Extremera, Duran, & Rey, 2007). Szymanowicz and Furnham (2013) indicated a tendency of boys to have overestimated views of their emotional skills, opposite to females' propensity to under-estimate them. Bandura, Caprara, Barbaranelli, Gerbino and Pastorelli (2003) indicated that this lower emotional self-efficacy in girls was associated with lower psychological adjustment and more depressive and anxiety symptoms in this subsample compared to boys. Moreover, these authors showed that positive self-efficacy to regulate the emotions is accompanied by high efficacy to manage one's academic development, to resist social pressures for antisocial activities, and to engage oneself with empathy in others' emotional experiences. Thus, despite girls present higher ability EI, their underestimation of emotional skills is expected to hinder girls' self-esteem during adolescence. In the present study, the main goal was to advance the explanation of gender differences in self-esteem during adolescence, specifically, by researching more deeply the role of perceived EI skills in these differences. To our knowledge no study has dealt with this issue, and it is relevant given the significance of self-esteem as a driving force for positive development in the adolescent life stage, the consequences of gender differences in self-esteem during this transitional period, and the role of perceived EI in adolescent psychological adjustment.

Aims and hypotheses

This research study has three specific aims: (a) to examine gender differences in adolescent self-esteem and perceived EI, (b) to study the relationships between perceived EI and self-esteem by gender, and (c) to analyze to what extent gender differences in self-esteem are cross-sectionally associated with gender differences in perceived EI. Concerning the first aim, we hypothesize that girls present lower self-esteem than boys, in line with conclusions of the cross-cultural study on gender differences in self-esteem by Bleidorn et al. (2015). Moreover, we expect a lower perceived EI in girls than boys, consistently with the results observed by Extremera et al. (2007), i.e. girls reporting higher perceived emotional attention but lower perceived emotional clarity and repair. Regarding the second aim, greater self-esteem is expected to be associated, in both boys and girls, with lower perceived emotional attention, higher perceived emotional clarity and higher perceived emotional repair, consistently with the results by Rey et al. (2011). Furthermore, concerning the third aim, our hypothesis establishes that gender differences in perceived EI are associated with gender differences in self-esteem in adolescence, so that lower perceived EI in girls is expected to be related to lower self-esteem in this subsample. Although to our knowledge no study has addressed this question, this hypothesis may be established based on the conclusions by Bandura et al. (2003), who indicated that lower emotional self-efficacy in girls was linked with lower psychological adjustment.

METHOD

Participants

A total of 1791 adolescents (51% of girls) aged between 12 and 17 years old ($M = 14.15$, $SD = 1.34$), participated in this study. They were enrolled in a total of 19 high schools in Andalusia, located in the south of Spain. In order to obtain a heterogeneous sample, schools of different ownership (private and public) and habitats (rural, urban, city) took part in the study. Moreover, in each secondary school, participating classes were randomly selected from the four academic years of Compulsory Secondary Education in the Spanish educational system. Thus, one class was randomly selected in each academic year within each secondary school. Concerning the parental level of education, adolescents reported that 13.7% of the fathers and 15.9% of the mothers had primary education, 44.6% of fathers and 46% of mothers had secondary education, whereas 25.6% of fathers and 26% of mothers completed higher education. Moreover, some adolescents indicated that they did not know the paternal (16.2%) or maternal (12.1%) educational level.

Study design and data collection procedure

A cross-sectional design was used. Data were collected by administering a self-report measure to each of the classes selected. In order to check psychometric properties of the instrument, two pilot studies were

previously carried out, in secondary schools with similar characteristics to those evaluated in the definitive fieldwork. The first of these pilot studies was performed in two secondary schools with a sample of 191 adolescents. In the second study, three educational institutions took part with a total sample of 266 adolescents. All the questionnaires showed good psychometric properties.

The instrument was filled in individually and anonymously. Practically all the pupils agreed to take part in the study, and there were very few omissions in their responses. The present study respected all the principles of the Declaration of Helsinki, and the adolescents participated voluntarily, being verbally informed about the characteristics of the survey (also described on the first page of the questionnaire). Informed consent was obtained from all individual participants included in the study and their parents. Finally, we point out that none of the questions and scales included in the instrument generated any kind of discomfort in the adolescents, and did not present any comprehension problem.

Instrument and variables

The instrument was composed of two self-report measures to assess perceived EI and self-esteem, in addition to some demographic questions (gender, age and parental level of education).

Trait Meta-Mood Scale (TMMS; Salovey et al., 1995)

A 12-item adolescent version of the Spanish validation of TMMS was used (Fernandez-Berrocal, Extremera, & Ramos, 2004; Gómez-Baya, 2014). This version consists of three subscales, each with 4 items, and presents a 5 Likert-type response options from “never” to “very often”. This scale assesses perceived emotional intelligence, differentiating three perceived skills in emotion regulation: perceived emotional attention, which refers to the perception of the level of attention given to one’s own emotional states; perceived emotional clarity, which is the perception of the degree of clear understanding of one’s own emotions; and perceived emotional repair, conceived as the perceived ability to regulate one’s own emotional states, turning negative emotional states into positive ones. The overall score in each subscale consists of the sum of the scores in the respective items. Thus, the scores range from a minimum of 4 up to a maximum of 20 in each subscale. The three subscales presented notable internal consistency reliability, since the perceived emotional attention subscale presented a Cronbach’s Alpha of .91, the perceived emotional clarity subscale showed a Cronbach’s Alpha of .84 and the perceived emotional repair subscale reached a Cronbach’s Alpha of .88.

Rosenberg Self-esteem Scale (Rosenberg, 1965).

The Spanish version of this scale, developed by Atienza, Balaguer and Moreno (2000), was used in this study. It is composed of 10 Likert-type items with 4 response options, from “completely agree” to “completely disagree”. The overall score in self-esteem is calculated by adding the score in all the indicators. Accordingly, the score ranges from 10 to 40. This scale presented notable internal consistency reliability in this study, as indicated a Cronbach’s Alpha of .82.

Data analysis

Little’s test was performed in order to check that missing values were distributed completely at random. In case of the missing values are distributed completely at random, a maximum likelihood imputation, based on expectation-maximization algorithm, would be performed using SPSS 21.0. Furthermore, Kolmogorov-Smirnov tests with Lilliefors’ correction were conducted in order to check if the variables show a normal or non-parametric distribution. We used an α level of .05 for all statistical tests.

Regarding the first aim of the study, gender differences were analyzed by comparing the mean scores of boys and girls in overall self-esteem and in each perceived EI skill (i.e. perceived emotional attention, perceived emotional clarity and perceived emotional repair). Concerning the second aim, two analyses were carried out to examine the association between perceived EI and self-esteem. First, bivariate correlations were calculated in order to examine the associations by gender between each perceived EI skill and self-esteem. Second, a stepwise regression analysis was performed to examine the self-esteem’s variance explained by demographics and perceived EI skills. Thus, in the first step of this analysis, demographic variables were included, i.e. gender, age and parental level of education. Moreover, the school in which the adolescent was enrolled was controlled in this first step. In the second step, the three perceived EI dimensions were included. Regarding the third aim, moderation analyses were conducted, based on stepwise regression analyses and following the indications of Baron and Kenny (1986) and Aiken and West (1991). These moderation analyses allow to examine if perceived EI skills and self-esteem are differently associated by gender. In these analyses, each perceived emotional intelligence dimension was considered as an independent variable, self-esteem was the dependent variable, and gender was examined as a moderator. Thus, the moderator can change the relationship between

independent and dependent variable according to its values, so that different self-esteem levels could be observed in boys and girls according to their perceived EI. The moderation of gender in the association between a perceived EI skill and self-esteem is calculated as the effect of the interaction of "gender x perceived EI skill" on self-esteem. Moreover, gender moderations in the associations among perceived EI skills were also analyzed. A macro for SPSS 21.0 called Process was applied in order to perform moderation analyses (Hayes, 2013). Finally, Modgraph-I was used for the graphical display of the moderation analyses, following the procedure described by Jose (2013).

RESULTS

Descriptive statistics and gender differences in self-esteem and perceived EI

Little's test showed that missing values were distributed completely at random, $\chi^2(21, N = 1791) = 25.94$, $p = .209$. Thus, a maximum likelihood imputation, based on expectation-maximization algorithm, was conducted to deal with missing values. Furthermore, Kolmogorov-Smirnov tests showed a non-parametric distribution of all study variables, $D(1791) = .07$, $p < .001$. Consequently, non-parametric statistics were calculated to analyse gender differences (i.e. Mann-Whitney's U) and the associations between variables (i.e. Spearman correlations). Descriptive statistics (mean and standard deviation) by gender are presented in Table 1.

The first aim of the study was to analyze gender differences in perceived EI and self-esteem. To achieve this goal, four Mann-Whitney's U -tests were carried out. Significant gender differences in self-esteem and perceived EI were observed. Results indicated that girls present lower self-esteem than boys ($U = 323,222.50$, $Z = -7.10$, $p < .001$, $MD = 1.64$), as well as lower perceived emotional clarity ($U = 376,161.50$, $Z = -2.26$, $p = .024$, $MD = .35$), lower perceived emotional repair ($U = 329,596.50$, $Z = -6.53$, $p < .001$, $MD = 1.28$) and higher perceived emotional attention ($U = 472,731.50$, $Z = 6.59$, $p < .001$, $MD = -1.35$).

Table 1. Descriptive statistics, Spearman correlations among self-esteem and perceived emotional intelligence skills, and reliability (Cronbach's α in brackets), by gender.

	Sample	1	2	3	4	<i>M</i>	<i>SD</i>
1. Self-esteem	Total	(.82)				30.53	5.07
	Boys	(.81)				31.36	4.97
	Girls	(.82)				29.72	5.04
2. Perceived Emotional attention	Total	-.09*	(.91)			13.29	4.17
	Boys	-.02	(.90)			12.60	4.28
	Girls	-.11*	(.90)			13.95	3.96
3. Perceived Emotional clarity	Total	.32*	.25*	(.84)		13.92	3.62
	Boys	.35*	.35*	(.84)		14.10	3.74
	Girls	.28*	.18*	(.83)		13.75	3.49
4. Perceived Emotional Repair	Total	.41*	.13*	.43*	(.88)	13.42	4.30
	Boys	.39*	.24*	.48*	(.88)	14.07	4.27
	Girls	.41*	.06	.38*	(.87)	12.79	4.23

Note. * $p < .001$

Bivariate correlations and stepwise regression analyses

Regarding the second aim of the study, some analyses were performed to examine the associations between perceived EI and self-esteem by gender. First, Spearman correlational analyses showed that self-esteem was positively related with perceived emotional clarity and perceived emotional repair, in both boys and girls (Table 1). The greater association was observed between self-esteem and perceived emotional repair. Furthermore, self-esteem was negatively related with perceived emotional attention only in girls. Results also detected positive associations between emotional attention and emotional clarity, and between emotional clarity and emotional repair, in both boys and girls. However, emotional attention showed a positive correlation with emotional repair only in the subsample of boys.

Second, three stepwise regression analyses were conducted in order to explain the self-esteem's variance from demographic variables and perceived EI, by gender and following the associations detected in previous correlations. Table 2 describes the results of the stepwise regression analyses in the sample of boys, in the sample of girls and in the total sample. In the first step of the analysis with the total sample, gender and age showed a significant effect on self-esteem. In the second step, perceived EI was introduced in the analysis and only gender effect remained significant. That gender effect underlined the significant gender differences already examined by previous analysis. Furthermore, stepwise regression analysis with the total sample showed that the three dimensions of perceived EI added a percentage of

explained variance of around 20% to demographics in the total sample. The analyses by gender indicated that perceived emotional clarity and repair showed a positive effect on girls' and boys' self-esteem, whereas perceived emotional attention presented a negative effect in girls' subsample. Moreover, the percentage of explained variance in this final step was higher in girls ($R^2 = .22$) than boys ($R^2 = .17$).

Table 2. Stepwise regression analyses of explanatory variables of self-esteem, by gender and in the total sample.

	<i>Boys</i>				<i>Girls</i>				<i>Total</i>			
	<i>F</i>	<i>R</i> ²	<i>t</i>	β	<i>F</i>	<i>R</i> ²	<i>t</i>	β	<i>F</i>	<i>R</i> ²	<i>t</i>	β
Step 1	.48	.00			3.17*	.01			11.05***	.03		
Gender											-6.84	-.16***
Age			.19	.01			-3.00	-.10**			-2.57	-.06*
School			.47	.02			.04	.01			.26	.01
Father's academic level			-.06	-.01			-.06	-.01			.26	.01
Mother's academic level			-1.27	-.05			1.40	.06			.57	.02
Step 2	27.75***	.17			35.18***	.22			66.74***	.23		
Gender											-3.37	-.07**
Age			1.00	.03			1.08	-.03			-.44	-.01
School			1.06	.03			-.09	-.01			.61	.01
Father's academic level			-.41	-.01			.51	.02			1.00	.03
Mother's academic level			-1.71	-.06			.81	.03			.09	.01
Perceived emotional attention							-5.54	-.17***			-7.94	-.18***
Perceived emotional clarity			4.81	.18***			4.65	.15***			8.15	.20***
Perceived emotional repair			8.11	.30***			11.08	.36***			14.59	.34***

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

Moderation analyses

Three moderation analyses, based on stepwise regression analyses, were performed in order to test gender moderation in the association of each perceived EI skill with self-esteem. In the first stepwise regression analysis, gender moderation in the relationship between perceived emotional attention and self-esteem was examined. In the first step, gender ($\beta = -.15$, $t = -6.40$, $p < .001$) and perceived emotional attention ($\beta = -.07$, $t = -2.78$, $p = .005$) presented significant effects on self-esteem, $F(2, 1788) = 27.94$, $p < .001$, $R^2 = .03$. In the second step, the interaction of "gender x perceived emotional attention" was introduced in the analysis to test gender moderation. This interaction showed a significant effect on self-esteem ($\beta = -.18$, $t = -2.46$, $p = .014$), $F(3, 1787) = 20.69$, $p < .001$, $\Delta R^2 = .01$. Consequently, results indicated that gender moderated the association between perceived emotional attention and self-esteem. Figure 1 shows that girls who paid higher attention to their emotions presented lower self-esteem, whilst no differences were found in the subsample of boys. Therefore, girls who reported high attention to emotions showed lower self-esteem than girls with low emotional attention. The moderation of gender in the association of perceived emotional attention and self-esteem can be explained because of the differential effect of high perceived emotional attention on self-esteem in boys and girls. In the second stepwise regression analyses, gender ($\beta = -.15$, $t = -6.61$, $p < .001$) and perceived emotional clarity ($\beta = .30$, $t = 13.28$, $p < .001$) presented significant effects on self-esteem, $F(2, 1788) = 114.57$, $p < .001$, $R^2 = .11$, whereas the interaction of "gender x perceived emotional clarity" did not show a significant effect on self-esteem ($\beta = -.06$, $t = -.88$, $p = .379$). In the third analysis, gender ($\beta = -.10$, $t = -4.71$, $p < .001$) and perceived emotional repair ($\beta = .40$, $t = 18.67$, $p < .001$) also explained self-esteem's scores, $F(2, 1788) = 203.00$, $p < .001$, $R^2 = .19$, whereas their interaction did not present a significant effect ($\beta = .05$, $t = .74$, $p = .460$). Thus, gender did not moderate the relationships of both perceived emotional clarity and perceived emotional repair with self-esteem. In both boys and girls, perceived emotional clarity and repair were positively associated with self-esteem.

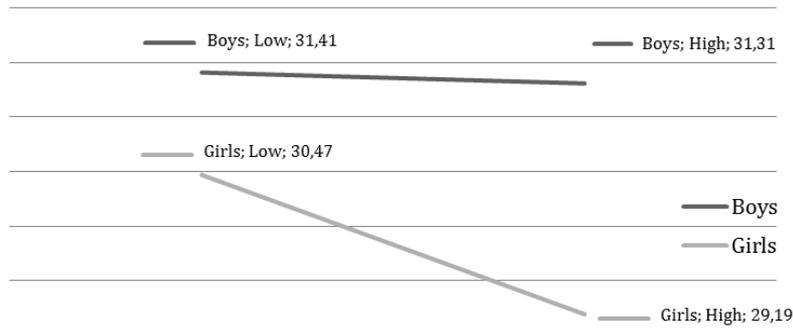


Figure 1. Means in self-esteem by gender and levels of perceived emotional attention.

Furthermore, the interaction "gender x perceived emotional attention" was found to explain the scores in perceived emotional clarity and repair. First, results of a moderation analysis to examine the gender moderation in the association between perceived emotional attention and perceived emotional clarity indicated that: in the first step, gender ($\beta = -.10, t = -4.13, p < .001$) and perceived emotional attention ($\beta = .29, t = 12.46, p < .001$) explained the 8.1% of the variance of perceived emotional clarity, $F(2, 1788) = 79.97, p < .001$; and, in the second step, gender interacted with perceived emotional attention ($\beta = -.31, t = -4.38, p < .001$) to explain perceived emotional clarity, $F(3, 1787) = 60.24, p < .001, \Delta R^2 = .01$. The gender moderation indicated a stronger association between perceived emotional attention and clarity in the subsample of boys. Figure 2 indicates that the differences in perceived emotional clarity on the basis of the levels of perceived emotional attention were bigger in boys than girls. Moreover, whereas no gender differences in perceived emotional clarity were observed in the groups with low perceived emotional attention, substantial differences were found between boys and girls with high perceived emotional attention. Thus, high perceived emotional attention was related with greater perceived emotional clarity in boys than in girls.

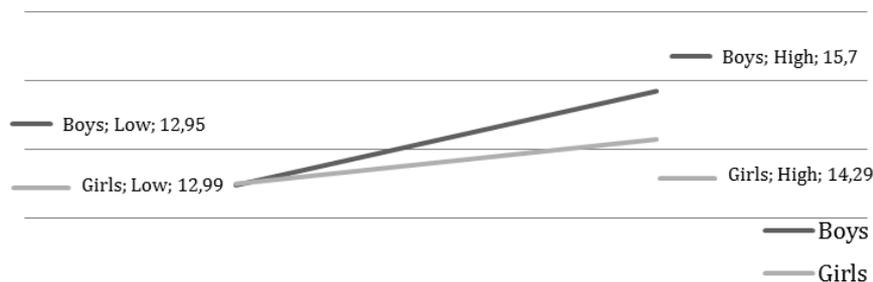


Figure 2. Means in perceived emotional clarity by gender and levels of perceived emotional attention.

Other moderation analysis examined the effect of "gender x perceived emotional attention" on the scores in perceived emotional repair. In the first step of this analysis, both gender ($\beta = -.17, t = -7.45, p < .001$) and perceived emotional attention ($\beta = .16, t = 6.73, p < .001$) had significant effects on perceived emotional repair, $F(2, 1788) = 43.39, p < .001, R^2 = .05$. In the second step, gender moderated the association between perceived emotional attention and perceived emotional repair ($\beta = -.30, t = -4.11, p < .001$), $F(3, 1787) = 34.82, p < .001, \Delta R^2 = .01$. The gender moderation indicated that there were differences in perceived emotional repair by the levels in perceived emotional attention in the subsample of boys, but no substantial differences were detected in girls. Figure 3 shows that gender differences in perceived emotional repair were especially important in adolescents with high perceived emotional attention, so that boys reported greater mean scores than girls. Consequently, high perceived emotional attention was associated with greater perceived emotional repair only in boys.

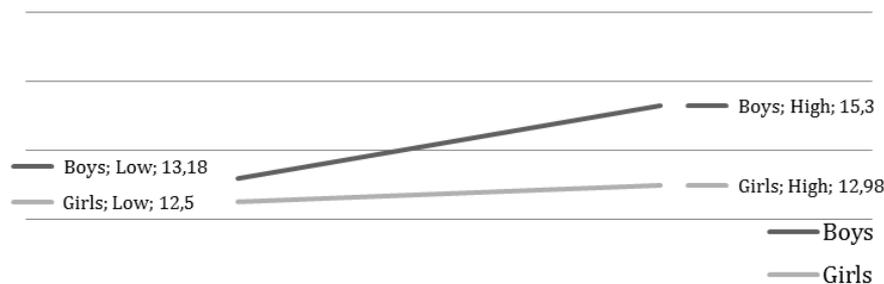


Figure 3. Means in perceived emotional repair by gender and levels of perceived emotional attention.

DISCUSSION AND CONCLUSIONS

This research had three aims, i.e. to study gender differences in self-esteem and perceived EI in adolescence, to analyze the associations between self-esteem and perceived EI, and to examine whether gender differences in adolescent self-esteem were partly associated with gender differences in perceived EI. Regarding the first aim, girls presented lower self-esteem than boys, in line with previous works with adolescent samples (Bachman et al., 2011; Major et al., 1999; Twenge & Campbell, 2001). Previous research suggested several possible explanations, such as the influence of gender roles, differences in peer relationships, differences in the interaction with teachers in school, the cultural emphasis on women's physical appearance, having suffered some kind of violence, or different levels of sports participation (Kling et al., 1999; Polce-Lynch et al., 2001). Lower self-esteem in girls would hinder their positive development as adolescents and their ability to cope with challenges they face as apprentice adults, and would place them in a risky position for substance abuse and psychological disorders (de Jong et al., 2012; McKay et al., 2012). Furthermore, gender differences were also observed in perceived EI, i.e. girls reported that they perceived their emotions less clearly and presented less ability to repair negative emotional states, than boys indicated. Moreover, girls reported a greater perceived emotional attention than boys, which underlines that girls considered that they pay attention to their emotions more frequently than boys reported. These conclusions are consistent with conclusions reached by Extremera et al. (2007) and Bandura et al. (2003). These gender differences can be due to a different social construction of affective experiences and different emotional expression styles (Bandura et al., 2003), so that perceptions on emotional skills are biased by gender stereotypes and sex roles, which determine the different, appropriate behaviours for boys and girls (Lopez-Zafra & Gartzia, 2014). Moreover, this underestimation of EI in adolescent girls can be explained by gender differences in emotional socialization in the family context, as reported by Schwartz, Sheeber, Dudgeon and Allen (2012). Thus, differences in parental responses to emotions and beliefs about emotional skills by gender can determine the development of emotional self-perceptions during adolescence.

Regarding the second aim, the present research detected that self-esteem was positively related to perceived EI in adolescence. In line with the results by Rey et al. (2011), self-esteem was positively associated with perceived emotional clarity and perceived emotional repair, and negatively with perceived emotional attention. Specifically, the greater relationship was detected between self-esteem and perceived emotional repair, so that the perception of own efficacy to regulate negative emotional states was the stronger determinant of self-esteem, in line with Flores and Oliva (2015). Literature to date has documented that the perception of own emotional skills rather than the actual abilities for emotional processing are related to psychological adjustment (Martins et al., 2010). Self-perceptions of emotional skills were found to moderate the relationship between stress and mental health (Ciarrochi et al., 2002), encouraging an adaptive coping that allows to resist situational threats and maintain a positive self-esteem (Schutte et al., 2002), and preventing mood deterioration in stressful situations (Mikolajczak et al., 2009). Thus, adolescents with higher perceived EI were more likely to perceive a greater self-worth (Kong et al., 2012). As perceived EI has been positively associated with greater psychological well-being during adolescence, gender differences in perceived EI would place teenage girls at a greater vulnerability (Fernandez-Berrocal et al., 2006). If no emphasis is placed on the adequate acquisition of these emotional skills as well as their accurate perception in girls, they would encounter more difficulties in the process of adaptation to developmental changes and challenges during adolescence (Sánchez, Fernández-Berrocal, Montañes, & Latorre, 2008).

Concerning the third aim of the present research, some substantial conclusions can be described. Our results indicated that high perceived emotional attention would hinder girls' self-esteem but improve both perceived emotional clarity and repair in the sample of boys (which in turn are associated with

better self-esteem). This differential role of perceived emotional attention by gender can be explained from gender differences in rumination. Nolen-Hoeksema and Jackson (2001) reported that girls engaged more frequently in a passive focus on one's negative emotions and on their possible causes and consequences. Rumination was found to provide vulnerability to emotional disorders, whereas distraction proved to reduce emotional distress. Furthermore, a meta-analysis conducted by Mor and Winquist (2002) concluded that a heightened self-focused attention was found to be strongly associated with negative affect in female. Thus, girls who report great attention to their emotions are more likely to present lower psychological adjustment, because of its direct negative effect on self-esteem. In contrast, boys who reported high perceived attention did not show worse self-esteem's scores, but they indicated more likely that they perceived clearly their emotions and were able to successfully repair negative emotional states. In turn, a greater perceived EI in boys would provide higher self-esteem in this subsample. Furthermore, some authors have found a tendency of boys to have inflated views of their abilities in contrast to girls' propensity to underestimate their worth (Szymanowicz & Furnham, 2013). Thus, it is expected that girls' tendency to underestimate their emotional skills is associated with the underestimation of their own worth too. The underestimation of emotional skills hinders the possibility for girls to take advantage on their greater ability EI (Rivers et al., 2012) to cope with changes and challenges during adolescence transition, which could lead to lower self-esteem, in line with the conclusions described by Bandura et al. (2003).

Consequently, the present study has shown that gender differences in adolescent self-esteem are partly associated to gender differences in perceived EI and the different way in which these emotional self-perceptions are interrelated with the self-assessment of one's own value. The lower self-esteem presented by adolescent girls in comparison with boys, is partly explained by a lower perceived EI in adolescent girls. Importantly, a greater perceived attention to own emotions presents different correlates by gender. In girls, high perceived attention is associated with lower self-esteem, but in boys it is linked to greater perceived clarity and repair, which are in turn relate to higher self-esteem in boys. Consequently, the results of this study suggest an explanation of gender differences in adolescent self-esteem on the basis of gender differences in emotional self-perceptions.

Despite the importance of this study, we should also describe several limitations. The first limitation comes from the characteristics of the study design. A cross-sectional and descriptive study only allows drawing conclusions based on bidirectional associations between perceived EI and self-esteem, but neither causal relationships nor antecedents/consequents in those relationships can be established. Although previous research has provided strong evidence for the role of perceived EI in self-esteem and psychological adjustment (Mikolajczak et al., 2009; Schutte et al., 2002), some studies have discussed the reciprocal influences between perceived EI and self-esteem. Recently, Cheung, Cheung and Hue (2015b) have detected that self-esteem has a positive effect on perceived EI, whereas the effect of perceived EI on self-esteem is not significant. The affective model of self-esteem postulated by Brown, Dutton and Cook (2001) established that people with high self-esteem are more adept than people with low self-esteem at developing and preserving self-worth's feelings, by claiming to possess socially desirable traits and denying the undesirable ones. Consequently, longitudinal and experimental research is needed in order to explore the directionality and the mechanisms implicated in the association between self-perceptions of EI and self-esteem, as well as providing causal conclusions. Furthermore, a longitudinal design can also provide an assessment of the stability of self-esteem (Kernis, 2005) and the developmental dynamics during adolescence. However, some strengths of this cross-sectional study could be highlighted, such as the size, heterogeneity and partially random selection of the sample, as well as the good psychometric properties of the instruments. The second limitation is the unique assessment of overall self-esteem. Although the assessment of global self-esteem has been well validated in adolescents and young people (Ciarrochi, Chan, & Bajgar, 2001; Quintão, Delgado, & Prieto, 2011), a future research line comes from the need to examine the role of perceived EI in both global self-esteem and domain-specific self-esteem. Gentile et al. (2009) analyzed gender differences in domain-specific self-esteem, indicating that men scores higher on physical appearance, athletic, personal self and self-satisfaction self-esteem, women reported higher scores in behavioural conduct and moral-ethical self-esteem, whereas no differences were observed on academic, social acceptance, family and affect self-esteem. So, more research is also needed to explore the associations of perceived EI skills and each domain of self-esteem, as well as examining gender moderation during adolescence. Other research line can be derived from the analysis of the contingencies of self-worth by gender and perceived EI (Crocker, Brook, Niiya, & Villacorta, 2006).

Finally, the contributions of this research can suggest the need to implement school-based emotional education programmes, together with programmes designed to promote self-esteem (Greenberg et al., 2003). Programmes to develop EI have already demonstrated efficacy, not only in improving emotion regulation skills, but also in contributing to a better psychological adjustment (Ruiz-

Aranda, Fernández-Berrocal, Cabello, & Salguero, 2008). Our results also suggest the need to perform gender-specific interventions in order to reduce differences in self-esteem, combined with the promotion of adaptive EI skills and more adjusted perceptions of EI. Some authors have discussed the possibility of teaching and developing emotional intelligence (Humphrey et al., 2007; Qualter, Gardner, & Whiteley, 2007), and have highlighted the importance of educational policy to promote socio-emotional learning (Mayer & Cobb, 2000). The Collaborative for Academic, Social and Emotional Learning (CASEL) has conducted intervention programmes to promote social and emotional learning (Zins & Elias, 2007). From the perspective of these programmes, a recent meta-analysis of school-based universal interventions has well documented the positive impact of enhancing students' social and emotional learning on self-esteem, attitudes towards others, positive social behaviour, psychological well-being and academic performance (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Zeidner, Roberts and Mathews (2002) proposed several key elements for the development, implementation and evaluation of programmes designed to promote emotional intelligence in schools, such as the need to consider the context in which these programmes will be implemented, the integration of programmes in school curriculum, to ensure that acquired skills are transferable to other contexts, and the training of professionals involved. Thus, our research has provided empirical evidence that suggests other key element to take into account in the design of emotional education programs: the gender differences in self-perceptions of EI skills and their role in adolescent self-esteem.

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