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Perceived Emotional Intelligence, Subjective Well-Being, Perceived Stress, Engagement and Academic Achievement of Adolescents

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Abstract

This study extends previous research on perceived emotional intelligence (PEI), since it examines the connections between the PEI, perceived stress, subjective well-being, academic engagement, academic performance, age and sex in a sample of adolescents. It also analyses if the relationship between the PEI and performance is mediated by perceived stress, subjective well-being and/or academic engagement. The results obtained on a sample of 626 participants aged 13 to 18 show the existence of relationships between PEI and all the analyzed variables, except for age and academic achievement; as well as all the hypothesized variables as mediators show association with academic perfomance. The indirect effect of the PEI on this last is produced through the greater commitment to the study (engagement) and the least perceived stress. The implication of the results for different relational proposals between PEI and assessed variables is discussed.

Keywords: perceived emotional intelligence, academic engagement, subjective well-being, perceived stress, academic achievement.

Resumen

El presente estudio extiende la investigación previa sobre inteligencia emocional percibida (IEP), al examinar las conexiones entre IEP, estrés percibido, bienestar subjetivo, *engagement* académico, rendimiento, edad y sexo en una muestra de adolescentes; al tiempo que explora si estrés percibido, bienestar subjetivo y/o *engagement* académico median la asociación IEP y rendimiento. Los resultados obtenidos en una muestra de 626 participantes de entre 13 y 18 años muestran la existencia de relaciones entre IEP y todas las variables analizadas, a excepción de edad y rendimiento; al tiempo que todas las variables hipotetizadas como mediadoras sí se asocian con el rendimiento académico. El efecto indirecto de la IEP sobre este último se produce a través del mayor compromiso con el estudio (*engagement*) y el menor estrés percibido. Se discute la implicación de los resultados para diferentes propuestas relacionales entre IEP y las variables evaluadas.

Palabras clave: inteligencia emocional percibida, *engagement* académico, bienestar subjetivo, estrés percibido, rendimiento académico

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Introduction

While general intelligence is revealed insufficient as universal predictor of the obtained success in different domains of life, the last two decades of the XX century have been essential on redirecting the researchers' attention to specific intelligences. During the eighties, a new idea germinated in which intelligence is not single, but multiple (Gardner, 1983; Sternberg, 1985). Since the nineties, different intelligences —as the emotional, related to personally relevant information— have been explored (Mayer, Roberts, & Barsade, 2008).

The current prevalent model in the scientific study of the Emotional Intelligence (EI) is the ability model proposed by Mayer and Salovey (Mayer, Caruso, & Salovey, 1999). According to this model, the EI is conceived as "*the ability to perceive accurately, appraise, and express emotion; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth*" (Mayer & Salovey, 1997, p. 10). These emotional skills, which allows a better processing and understanding of the emotional information, would be associated to such important results in different domains of daily life as higher levels of well-being, psychological adjustment and/or an improvement in the academic achievement (Mayer et al., 2008; Salovey, Mayer, & Caruso, 2002).

A widely used way of assessing the EI is based on self-report measures, which reflect what a person perceives on his own emotional competences. So, these measures provide information on the so-called Perceived Emotional Intelligence —PEI— (Mayer, Salovey, & Caruso, 2000; Salovey, Stroud, Woolery, & Epel, 2002). Based on the model of Salovey and Mayer (1990), the most widely used instrument to assess the PEI is the *Trait Meta-Mood Scale* (TMMS; Salovey, Mayer, Turvey, & Palfai, 1995), consisting of three subscales: *emotional attention*, *clarity* and *repair*.

Previous Spanish studies have examined the relationship between the TMMS-24 subscales (Spanish adaptation of Fernández-Berrocal, Extremera, & Ramos, 2004) and subjective well-being (Diener, 1984). These studies have shown a positive association between both variables in college students (Extremera, Salguero, & Fernández-Berrocal, 2011), adults (Vergara, Alonso-Alberca, San-Juan, Aldás, & Vozmediano, 2015), adolescents (Rey & Extremera, 2012) and primary school pupils (Ferragut & Fierro, 2012). Furthermore, there are studies that have found a relationship between PEI and life satisfaction in both young and adult people (Vergara et al., 2015), as in undergraduated students (Extremera, Durán, & Rey, 2009) and adolescent population (Rey, Extremera, &

Pena, 2011). Moreover, the results are consistent to show that the specific skills of *emotional clarity* and *repair* play a significant role in the subjective well-being (Extremera et al., 2011; Ferragut & Fierro, 2012; Rey & Extremera, 2012; Rey et al., 2011; Vergara et al., 2015).

Studies addressing the relationship between perceived stress and PEI have also supported the existence of a negative relationship between these variables in adults and in undergraduated students (Augusto-Landa, López-Zafra, Berrios-Martos, & Aguilar-Luzón, 2008) and college students (Extremera, Durán, & Rey, 2007). These results suggest that *emotional clarity* and *repair* are negatively associated with stress, while the relationship between *emotional attentio*n and stress is positive (Augusto-Landa et al., 2008; Extremera et al., 2007).

The *engagement* is an emerging construct in Positive Psychology, introduced as opposed to *burnout* (Maslach, Schaufeli, & Leiter, 2001). Engagement is defined as a positive, fulfilling, and study-related state of mind that is characterized by *vigor*, *dedication* and *absorption* (Schaufeli, Salanova, González-Romá, & Bakker, 2002, p. 79). In the employment framework, different researchers have found a positive association between PEI and the engagement dimensions —*vigor*, *dedication* and *absorption*— (Esteban-Ramiro, 2014; Pena, Rey, & Extremera, 2012). Although still limited, other findings also suggest positive associations between PEI and engagement in college students (Extremera et al., 2007). Specifically, *emotional attention* and *repair* are related with *vigor* and *dedication*; while *emotional repair* is the only one associated to *absorption* (Extremera et al., 2007).

The inconsistency of results by the previous research prevents to conclude that there is empirical support for the association between academic achievement and TMMS-24 subscales (Fernández-Berrocal et al., 2004). So, some studies among undergraduated students have found a positive association between PEI and academic achievement (Pérez-Pérez & Castejón, 2006a), even after controlling the effect of the psychometric intelligence (Pérez-Pérez & Castejón, 2006b), while others have found no relation at all (Font, 2013). Some authors found only weak support for the relationship between both variables in students of secondary school (Buenrostro-Guerrero et al., 2012; Jiménez & López-Zafra, 2013) and, however, others don't detect any association in primary school pupils (Ferragut & Fierro, 2012). The lack of consistency reaches the results regarding the role of different skills. *Emotional repair* is the only skill related to academic performance in some papers (Buenrostro-Guerreo et al., 2012). In others, the academic grade is negatively associated with *emotional attention* and positively with *emotional clarity* and *repair* (Pérez-Pérez & Castejón, 2006a, 2006b).

According to the relationship between positive affect and success in different domains of daily life (Lyubomirsky, King, & Diener, 2005), research shows the existence of a positive association between academic achievement and subjective well-being (Ferragut & Fierro, 2012; García et al., 2015) and also point out a negative relationship between academic achievement and self-reported stress levels by students (Wintre et al., 2011). It should be noted another work, even though limited, which has found a positive association between engagement (specifically, the dimensions of *vigor* and *dedication*) and academic success in university students (Casuso-Holgado et al., 2013).

Several studies have also addressed the relationship of the PEI with sex and age. The conceptualization of EI as ability (Mayer & Salovey, 1997) leads to understand it as a genuine intelligence based in part on the observation and consequently it increases with age and experience. However, the results are not sufficiently consistent. Studies involving undergraduated students have found no association between PEI dimensions and age (Cazalla & Molero, 2014), and other studies with adolescents have only found a positive weak relationship between both variables (Salguero, Fernández-Berrocal, Balluerka, & Aritzeta, 2010). Finally, some studies have shown no differentiation in PEI between females and males (Cazalla & Molero, 2014). Nevertheless, most of them certainly demonstrate differences in PEI according to sex, both among secondary school (Salguero et al., 2010) and college population (Extremera et al., 2007; Molero, Ortega-Álvarez, & Moreno, 2010). Namely, the results show consistently that the males obtain higher scores in *repair*, whereas females score higher in *attention* (Antúnez, Navarro, & Adán, 2013; Extremera et al., 2007b; Molero et al., 2010). The results relating to *clarity* do not show the same consistency, but they suggest that is lower in females (Fernández-Berrocal & Extremera, 2008; Salguero et al., 2010).

This study address different aims. First, it extends previous research regarding relationships between PEI and subjective well-being, perceived stress and academic engagement in a sample of high school students. Second, it explores the possibility that the association between PEI and academic performance is mediated by subjective well-being, perceived stress and/or academic engagement. Finally, the existence of differences in PEI according to sex and age is analyzed as well.

Method

Participants

The final sample comprised six-hundred twenty-six adolescents

(317 males, 309 females) from Secondary Education and First of High School, aged 13 to 18 (M = 15.48; SD = 1.00). The participants come from four urban lay schools (three public and one private) of Castellón and Valencia provinces.

Instruments

Perceived Emotional Intelligence was evaluated through the Spanish version (TMMS-24) of the *TMMS* (Fernández-Berrocal et al., 2004; original version Salovey et al., 1995). The TMMS-24 is a 24-items self-report instrument based on a 5-point Likert scale. It consists of three subscales: *Attention* —degree to which individuals tend to observe and think about their feeling and emotions—, *clarity* —level of understanding regarding these emotions and feelings— and *repair* —extent to which the person believed to be able to interrupt the negative emotional states and prolong the positive ones—. The Cronbach's alpha (α_A = .89, α_C = .87, α_R = .83) and Composite Reliability (CR_A = .88, CR_C = .82, CR_R = .76) indicate a good global reliability of the scale in this study, although *emotional clarity* and *repair* present a lower Average Variance Extracted to the recommendable (AVE_A = .49, AVE_C = .37, AVE_R = .34).

Subjective well-being was measured by the Spanish version of the *Subjective Happiness Scale —SHS—* (Extremera, Fernández-Berrocal, González-Herrero, & Cabello, 2009; original version of Lyubomirsky & Lepper, 1999). The SHS is a self-report instrument consisting of 4 items rated on a 7-point Likert scale. Two items request respondents to describe themselves using both absolute ratings and ratings relative to peers, while the other two items offer brief descriptions of happy and unhappy individuals and ask respondents about the extent to which each description describes them. This instrument has shown adequate indices of reliability and validity in this study (α = .76, CR = .85, AVE = .63).

Perceived stress was assessed by the Spanish version of *Perceived Stress Scale —PSS—* (Remor & Carrobles, 2001; original version of Cohen, Kamarck, & Mermelstein, 1983). PSS is a self-report instrument consisting of 14 items rated on a 5-point Likert scale. It evaluates the level of experienced stress by the adolescents during the last month. In this study, the scale shows good reliability (α = .79, CR = .77), even if Average Variance Extracted is lower than recommended value (VME = .24).

The academic engagement was measured by Spanish brief version of the *Utrecht Work Engagement Scale for Students* (Benevides-Pereira, Fraiz de Camargo, & Porto-Martins, 2009; original version UWES-S-9; Schaufeli & Bakker, 2003). Respondents rate 9 items —seven point Likert

scale— comprised of three dimensions: *vigor* —energy level, persistence and effort in performing academic tasks—, *dedication* —extent of involvement in studies— and *absorption* —concentration and immersion levels—. Cronbach's alpha (α_V = .82, α_D = .79, α_A = .79), Composite Reliability (CR_V = .83, CR_D = .80, CR_A = .79) and Average Variance Extracted (AVE_V = .63, AVE_D = .57, AVE_A = .56) indicate an adequate reliability and validity of the UWES-S-9 scale in this sample.

The average scores from the first two evaluations were used as a measure of academic achievement. The high correlation obtained between both marks scores (r = .96) confirms the use of the average score as a reliable indicator of criterion.

Procedure

Fifteen public and private secondary schools of the Valencian Community were selected randomly and contacted by e-mail to request their involvement in the study. Once the schools showed their interest, a personal interview was arranged to explain the study characteristics and to confirm their participation. The tests were administered during a tutorial session between the months of March and May 2013. All participants provided informed consent. The average grade obtained by each student for the first and second evaluation was provided by each school.

Statistical analyses

The presence of random incomplete data was examined. Data were imputed following the procedure of "Mean substitution" whenever the percentage of lost data was less than 20%, otherwise the response protocol was removed (Hair, Anderson, Tatham, & Black, 1999).

In order to examine the reliability and validity of the used instruments were calculated the internal consistency indices, composite reliability and average variance extracted. Descriptive statistics were used to summarize socio-demographic and psychological characteristics of the participants. Correlation analysis and MANOVAS were calculated to explore bivariate relations between the studied variables. Several regression analyses were carried out to explore the predictive ability of PEI. Finally, the proposed mediational analyses were tested. The used statistical packages were: the statistical package SPSS 20.0, the macro PROCESS of SPSS and the program AMOS.

Results

Correlation analysis

Means, standard deviations, and Pearson correlations for the study variables are shown in Table 1. *Emotional attention* was positively correlated to perceived stress and

Table 1

Descriptive Statistics and Correlations Between the Variables of the Study

	1	2	3	4	5	6	7	8	9
1. *Attention* [a]									
2. *Clarity* [a]	.29***								
3. *Repair* [a]	.19***	.42***							
4. *Subjective Well-being*	.02	.34***	.50***						
5. *Perceived stress*	.25***	–.35***	–.40***	–.50***					
6. *Vigor* [b]	.19***	.19***	.27***	.13**	–.11**				
7. *Dedication*[b]	.19***	.15***	.29***	.18***	–.14**	.71***			
8. *Absorption* [b]	.19***	.17***	.22***	.11**	–.10*	.79***	.73***		
9. Achievement	.00	–.01	.04	.09*	–.15***	.21***	.36***	.25***	
10. Age	–.03	.04	–.01	.02	–.05	.01	.07	.03	.01
M	24.47	24.98	26.55	20.01	27.23	6.58	9.55	7.76	6.15
SD	6.71	6.16	6.31	4.37	7.14	4.22	4.38	4.12	1.65

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

[a] PEI dimensions;
[b] academic engagement subscales.

engagement subscales. *Emotional clarity and repair* correlated negatively with perceived stress and positively with emotional well-being and engagement subscales. PEI dimensions were not associated with academic performance.

Subjetive well-being and perceived stress were negatively correlated each other. Academic performance was and positively correlated with subjective well-being and negatively with perceived stress. The three engagement subscales were negatively associated with perceived stress and positively with subjective well-being and academic success. Finally, age does not correlate with any variable.

Gender differences

Multivariate analysis of variance (MANOVA) conducted to examine sex differences in the variables under study was found to be significant [Lambda (9. 616) = 13.85, $p < .001$, $\eta^2 = .17$] (Table 2). The females obtained higher scores in *emotional attention*, perceived stress, *dedication* and achievement; while males scored higher in *emotional repair* and subjective well-being.

Table 2

Mean Differences According to the Gender (MANOVA) (N_M = 317, N_F = 309)

Grups		*M (SD)*	*t*	*p*	*d of Cohen*
Attention [a]	Females Males	26.26 (6.53) 22.72 (6.42)	6.84	.001***	.55
Clarity[a]	Females Males	24.92 (6.55) 25.04 (5.77)	–2.47	.805	–.02
Repair[a]	Females Males	25.90 (6.37) 27.18 (6.20)	–2.56	.011*	–.02
Subjective Well-Being	Females Males	19.64 (4.41) 20.37 (4.31)	–2.09	.037*	–.17
Perceived stress	Females Males	29.17 (7.39) 25.34 (6.34)	6.95	.001***	.56
Vigor [b]	Females Males	6.91 (4.09) 6.26 (4.33)	1.90	.057	.15
Dedication [b]	Females Males	9.95 (4.28) 9.17 (4.45)	2.24	.026*	.18
Absorption [b]	Females Males	8.06 (3.92) 7.47 (4.31)	1.80	.073	.14
Achievement	Females Males	6.45 (1.59) 5.88 (1.66)	4.59	.001***	.37

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

[a] PEI dimensions;

[b] academic engagement subscales.

Regression analysis

Several MANOVAs were performed (*enter method*) to examine the prediction of PEI subscales on subjective well-being, perceived stress and engagement dimensions. Sex was introduced as control variable. Collinearity among PEI subscales was not detected. Emotional skills explained 28% of the variability in subjective well-being and 36% on the variance of perceived stress. All of them are significant in both regression equations. In contrast, engagement variance explained by PEI is substantially less: just over 10% in predicting dedication. Moreover, the predictive emotional skills are only *attention* and *repair*.

Table 3

Regression Analyses of the Emotional Skills on the Rest Studied Variables

	R^2	*t*	β	*p*	ΔR^2	Collinearity Indices	
						Tolerance	*VIF*
Step 1[a]	.01	4.36			.01		
1. Sex			.08	.04*			
Step 2: TMMS-24subscales[a]	.28	61.59			.28		
1. *Attention*			–.12	.00***		.83	1.20
2. *Clarity*			.19	.00***		.78	1.29
3. *Repair*			.44	.00***		.80	1.25
Step 1 [b]	.07	48.53			.07		
1. Sex			–.30	.00***			
Step 2: TMMS-24subscales[b]	.37	90.22			.36		
1. *Attention*			.37	.00***		.83	1.20
2. *Clarity*			–.32	.00***		.78	1.29
3. *Repair*			–.32	.00***		.80	1.25
Step 1[c]	.01	3.62			.00		
1. Sex			–.08	.06			
Step 2: TMMS-24subscales[c]	.10	16.71			.09		
1. *Attention*			.10	.01*		.83	1.20
2. *Clarity*			.07	.13		.78	1.29
3. *Repair*			.23	.00***		.80	1.25
Step 1[d]	.01	5.01			.01		
1. Sex			–.09	.03			
Step 2: TMMS-24subescalas[d]	.11	19.52			.11		
1. *Attention*			.11	.01**		.83	1.20
2. *Clarity*			.00	.97		.78	1.29
3. *Repair*			.28	.00***		.80	1.25
Step 1[e]	.01	3.23			.00		
1. Sex			–.07	.07			
Step 2: TMMS-24subescalas[e]	.08	12.60			.07		
1. *Attention*			.12	.00**		.83	1.20
2. *Clarity*			.07	.14		.78	1.29
3. *Repair*			.17	.00***		.80	1.25

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

[a] VD = *Subjective Well-being;*
[b] VD = *Perceived Stress;*
[c] VD = *Vigor;*
[d] VD = *Dedication;*
[e] VD = *Absorption*.

Mediation analysis

The bootstrapping procedure with 5,000 repetitions to estimate confidence intervals of 95% was used to explore the possible existence of indirect contribution of PEI in academic achievement, through subjective well-being, perceived stress and/or engagement.

The results suggest the existence of an indirect effect of the PEI dimensions on academic achievement through *dedication* (AE) (Table 4) and perceived stress (Table 5) variables.

Table 4

Mediational Model of the Engagement Dimensions in the Relationship Between PEI and Academic Achievement

Independent variables	Mediators	Effects of I.V to M	Direct effects of M to the DV	Total effect	Direct effect	Indirect effect	Confidence interval (CI) 95%	
Repair [a]				.01	–.01	.03*	.017	.039
	Vigor [b]	.19***	–.04			–.01	–.018	.001
	Dedication [b]	.21***	.16***			.03*	.020	.047
	Absorption [b]	.15***	.02			.00	–.004	.011
Clarity[a]				.00	–.01	.01*	.004	.023
	Vigor [b]	.13***	–.04			–.01	–.014	.000
	Dedication [b]	.11***	.15***			.02*	.007	.027
	Absorption [b]	.12***	.02			.00	–.004	.009
Attention [a]				–.01	–.03**	.02*	.007	.024
	Vigor [b]	.11***	–.04			–.01	–.012	.000
	Dedication [b]	.11***	.15***			.02*	.009	.029
	Absorption [b]	.11***	.02			.00	–.003	.009

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

[a] PEI dimensions;
[b] academic engagement subscales.

Table 5

Mediational Model of Stress and Subjective Well-Being in the Relationship Between PEI and Academic Achievement

Independent variables	Mediators	Effects of I.V to M	Direct effects of M to D.V	Total effect	Direct effect	Indirect effect	Confidence interval (CI) 95%	
Repair [a]				.01	–.01	.02*	.011	.039
	Subjective Well-being	.34***	.00			.00	–.012	.015
	Perceived stress	–.42***	–.05***			.02*	.013	.033
Clarity[a]				.00	–.03*	.02*	.015	.035
	Subjective Well-being	.24***	.01			.00	–.007	.012
	Perceived stress	–.40***	–.06***			.02*	.013	.034
Attention [a]				–.01	.00	–.01	–.018	.004
	Subjective Well-being	.03	.00			–.00	–.002	.002
	Perceived stress	.21***	–.05***			–.01	–.018	.005

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

[a] PEI dimensions.

Discussion

This work aims to extend previous research on the relationship between PEI and variables such as subjective well-being, perceived stress and academic engagement. The results support the existence of a positive relationship between PEI and subjective well-being and academic engagement, and a negative one between PEI and perceived stress.

The three emotional skills play a significant role in multivariate prediction of subjective well-being and perceived stress, but differ in the intensity and direction of the association. So, while *attention* is negatively associated with subjective well-being and positively with perceived stress, *clarity* and *repair* are

positively associated with subjective well-being and negatively with perceived stress. Likewise, just managing emotional states plays a key role in subjective well-being; however, in the level of perceived stress, the *attention* and understanding of feelings are as important as emotional management. These results are consistent both with previous research (Augusto-Landa et al., 2008; Extremera et al., 2007; Extremera et al., 2009; Ferragut & Fierro, 2012; King & Extremera, 2012; King et al., 2011; Vergara et al., 2015), as the characteristic pattern, according to Salovey et al. (1999), describes the person with high EI: high *clarity*, high *repair* and moderate/low *attention*. High *emotional attention* —especially when it is associated with low *clarity* and *repair*— could produce a ruminative process on the negative or stressful events, which would increase the duration and intensity of negative emotions and would harm, ultimately, coping (Peña-Sarrionandia, Mikolajczak, & Gross, 2015).

The results support the existence of a positive association, although weak, between each and every one of the PEI dimensions and academic engagement (Extremera et al., 2007). In the multivariate level, however, *emotional clarity* does not play a significant role in predicting the engagement dimensions. Thus, students who perceive and satisfactorily regulate their emotional states: (a) become more involved and concentrated on academic tasks; (b) show a higher level of energy and willingness to invest efforts; and (c) persist to a greater extent in front of difficulties that may arise during academic tasks development. In short, emotional skills foster positive attitudes by students towards studies and educational tasks.

According to the inconclusive and weak role it seems to play the PEI in academic success (Zeidner, Roberts, & Matthews, 2008) and some previous studies using the TMMS-24 (Fernández-Berrocal et al., 2004; Rajasingam, Suat-Cheng, Aung, Dipolog-Ubanan, & Wei, 2014), the results do not support the existence of a direct relationship between PEI and academic performance. Academic performance is related, and in the expected direction, with subjective well-being, perceived stress and engagement. As shown by previous research, (Casuso-Holgado et al., 2013; Ferragut & Fierro, 2012; Garcia et al., 2015; Struthers et al., 2000; Wintre et al., 2011) students who display higher subjective well-being, *vigor, dedication* and *absorption* and lower perceived stress, achieve better academic performance.

The absence of relationship between academic performance and PEI can be attributed to the used measure for academic performance: although it shows satisfactory reliability, may lack sufficient validity. In this regard, it has been suggested the need to adopt a less restrictive view of academic success that in-

cludes variables such as a positive attitude towards studies (Zeidner et al., 2008). The claim is that, despite the academic grade obtained being the performance measure usually used, grades do not always accurately reflect the conceptual, procedural and attitudinal responses by students. They neither precisely reflect their involvement, participation nor concentration (Jimenez & Lopez-Zafra, 2009). However, because the average results are positively associated with levels of *vigor, dedication* and *absorption* —engagement— shown by the students, this reasoning would be weakened. It instead strengthens the argument stated by Qualter, Whiteley, Hutchinson and Pope (2007) regarding the unlikelihood of a concept so broadly defined as EI to be able to predict academic success. In fact, other broadly defined concepts —as well-being or perceived stress— are weakly associated with academic performance. A variable like academic engagement can meet the request of the authors about considering more specific variables to improve levels of prediction.

The results show that the PEI dimensions have an indirect contribution —although weak— on academic performance through two variables: *dedication* and perceived stress. These results would be consistent with the use of a sequential model, as proposed by Extremera and Fernández-Berrocal (2004), in order to capture the relationship between EI and academic performance. According to this model, the EI affects the emotional adjustment and this, in turn, would facilitate obtaining better academic performance. Similarly, Zeidner et al. (2008) consider likely that the role of EI in academic performance is to protect the student of possible barriers to learning (e.g. distress, substance abuse, violence, etc). The obtained results in this research suggest that a higher PEI acts in two ways: by reducing a barrier to learning —perception stress— and by promoting a positive attitude towards it —educational-commitment/*dedication*—. Through both pathways it would be promoting an advantageous situation for academic success.

No correlation was found in the sample between PEI and age. Given these results, it can be argued the need to expand the age range under analysis in order to capture the PEI increase with experience. Not surprisingly, previous results indicate the absence of relationship between PEI and age in university population (Cazalla & Molero, 2014) or the presence of very weak relationships in adolescents, despite the large sample size tested (Salguero et al., 2010).

The results do support the existence of differences by gender in PEI, particularly the emotional skills of *attention* and *repair*. In keeping with most of the studies (Antúnez et al., 2013; Extremera et al., 2007; Molero et al., 2010), women show greater *attention*,

while men score higher in *repair*. In addition, the data seems to support the dysfunctional behavior of combining high *attention* to emotional states with low ability to regulate them, since women also exhibit higher scores in perceived stress —while men manifest higher levels of subjective well-being. It is noteworthy also that women obtain better academic performance despite their higher levels of perceived stress. One possible explanation for this finding may lie in the greater *dedication* —engagement— of the group, which would act as a buffer of perceived stress.

Certainly, this work presents some limitations that should be noted. First, the cross-sectional design used does not allow statements on possible causal relationships. In this regard, it is interesting to conduct future longitudinal studies and to apply statistical procedures that deepen detected relationships. Second, it must be emphasized —given the different theoretical models, procedures and instruments of assessment- that the results are limited to the PEI measured by TMMS-24 (Fernández-Berrocal et al., 2004). Research in the field would benefit from including ability measures that would allow addressing not so much the perception but the actual performance as well as discounting the association between EI and other variables, the associated variance with the use of a common method of evaluation. Finally, the used indicator for academic performance is temporarily limited to two partial assessments of the same course; it would be interesting to explore the relationship between EI and performance, using broader temporal criteria of academic success.

Despite these limitations, this study is a step in the analysis of the played role by emotional skills in the well-being of the adolescent; in the degree to which he engages, focuses, and exerts himself on educational tasks, and in the academic success that he achieves.

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