

Validation of the Scale of Preferences and Expectations in Close Interpersonal Relationships (EPERIC)

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Abstract

Background: The most commonly used instruments for assessing adult attachment have shown differing combinations of items and divergences in the resulting sub-scales. **Method:** This study presents the *Scale of Preferences and Expectations in Close Interpersonal Relationships (Escala de Preferencias y Expectativas en las Relaciones Interpersonales Cercanas, EPERIC)*, made up of 22 items, and based upon the *Relationship Scales Questionnaire (RSQ)* of Griffin and Bartholomew. Exploratory and confirmatory factorial analyses (EFA and CFA) were undertaken using data from a sample of 594 people. **Results:** Factor analysis distinguishes three sub-scales: *Fear of rejection or abandonment*, *Desire for closeness* and *Preference for independence*, which explains 42.78% of the total variance. The alpha coefficients reveal a high internal consistency of the instrument and its sub-scales. Regarding validity, CFA showed an adequate fit for the trifactorial solution, and the expected correlations with other instruments for assessing attachment style in adults were found. EPERIC is also suitable for predicting affective states and psychological well-being. **Conclusions:** The EPERIC is a potentially useful and valid instrument for research and clinical purposes. The discussion focuses on the fact that our results support a model of three factors rather than two, as is usual in studies on adult attachment.

Keywords: Adult attachment, questionnaire, validity, internal consistency, confirmatory factor analysis.

Resumen

Validación de la Escala de Preferencias y Expectativas en las Relaciones Interpersonales Cercanas (EPERIC). **Antecedentes:** los instrumentos utilizados para evaluar el apego adulto han mostrado divergencias importantes en las combinaciones de ítems y en las subescalas resultantes. **Método:** en el presente estudio se ha construido la *Escala de Preferencias y Expectativas en las Relaciones Interpersonales Cercanas (EPERIC)* con un total de 22 ítems, partiendo del *Cuestionario-Escala de Relaciones Interpersonales (RSQ)* de Griffin y Bartholomew, y se han realizado análisis factoriales exploratorio y confirmatorio (AFE y AFC) con los datos procedentes de una muestra de 594 personas. **Resultados:** el análisis factorial sugiere la existencia de tres subescalas: *Temor al rechazo o al abandono*, *Deseo de cercanía* y *Preferencia por la independencia*, que explican un 42,78% de la varianza total. Los coeficientes alfa revelan una alta consistencia interna del instrumento y sus subescalas. En cuanto a la validez, el AFC muestra un adecuado ajuste para la solución trifactorial y se encontraron las correlaciones esperadas con otros instrumentos de evaluación del estilo de apego en adultos. El instrumento resulta también adecuado para predecir estados afectivos y bienestar psicológico. **Conclusiones:** el EPERIC es un instrumento potencialmente útil y válido para la investigación y la clínica. Se discute en torno al hecho de que los datos apoyen un modelo de tres factores en lugar de dos, como viene siendo habitual en los estudios sobre el apego adulto.

Palabras clave: apego adulto, cuestionario, validez, consistencia interna, análisis factorial confirmatorio.

The quality of the relationships that we maintain with people who are close to us largely determines our sense of emotional security and, in general, our aptitudes and capabilities. This was Bowlby's (1969) understanding when he defined the "attachment system" as a cybernetic behavioural and emotional control system, which is activated at times when children feel traumatised, worried, sick or intimidated, and which regulates the proximity of the caregiver as a function of the feedback over discrepancies between situations and goals. Bowlby's approach was initially developed

by taking account of the behaviour and development of an infant, but part of his thesis was that the attachment system is maintained throughout life, ready to be activated in times of difficulty. As a function of the infant's experience to attachment figures, each individual constructs "internal working models" regarding what to expect or despair about from the people they are close to and, by extension, to people in general. It is currently accepted that, as in infancy, adults engage systems that are (dys)functional to a greater or lesser extent in order to achieve goals and wellbeing in situations involving attachment (Ezama, Alonso, & Fontanil, 2010).

Hazan & Shaver (1987) were pioneers in the study of adult attachment. According to them, relationships between members of a couple involve reciprocal care and attachment, in contrast to the asymmetrical relationships between adult and baby. Later research supported the thesis that the functions of attachment behaviour are the same in children and adults: to establish and remain in

close contact with the attachment figure, maintaining proximity and resisting separation; and to rely on this attachment figure as a secure base for exploring and mastering the environment, or as a haven of consolation and protection (Feeney & Noller, 1996). In terms of assessing adult attachment, Bartholomew's team suggested that the patterns of attachment are derived from the combination of scores in two dimensions: *anxiety* and *avoidance* or, as termed by Shaver & Fraley (2010), one dimension of *fear of rejection and abandonment* and a second dimension of *discomfort with closeness to and dependence on others*. The first defines the degree to which we depend on the approval of another person in an intimate relationship, while the second defines our tendency to look for or reject intimacy in a relationship.

Both dimensions are derived from internal working models, *i.e.*, from the positive or negative character of one's concept of self (the model of the self) and one's concept of others (the model of the other). The positive character of the model of the self would indicate the degree to which a person has internalised a sense of their personal worth when faced with a feeling of anxiety or uncertainty of not being worthy of affection. The positive model of the other would indicate the degree to which we expect others to be available to take care of us. Subjects with a favourable concept of self and others are *secure*: they possess their own sense of worth and feel comfortable in intimate relationships. Subjects who hold an unfavourable concept of the self but a favourable concept of others would be *preoccupied*: they anxiously seek to be accepted and validated by others, and persist in their belief that they can achieve this. An unfavourable concept of both self and of others would characterise *fearful* subjects: they are highly dependent on acceptance and confirmation by others but their negative experiences lead them to avoid intimacy. Finally, subjects who are *dismissing* have a favourable concept of themselves and an unfavourable one of others and would reject intimate relationships, whilst maintaining a sense of personal worth (Bartholomew, 1990; Bartholomew & Horowitz, 1991).

The self-reporting type most frequently used for assessing adult attachment is the *Experiences in Close Relationships*, which evaluates attachment in relationships between couples (and which exists in Spanish version —ECR-S— validated by Alonso-Arbiol, Balluerka, & Shaver, 2007); as well as two reports that are not limited to relationships between couples, the *Relationship Scales Questionnaire* RSQ (Griffin & Bartholomew, 1994b), which has a non-validated Spanish version by Guerra Bustamante, Guerrero Barona, & León del Barco (1997), and the *Relationship Questionnaire* (RQ) by Bartholomew & Horowitz (1991), a tool incorporating four items devised to characterise attachment as an approximation to a prototype. The latter also exists in validated version in Spain (Alonso-Arbiol, 2000) and has been used for validation of ECR-S and for obtaining data from Spanish speakers as part of a large transcultural study (Schmitt, Alcalay, Allensworth, Allik, Ault, Austers et al., 2004).

The RSQ, which we take as the test bank for the present study, has been classified as an *omnibus measure* (Roisman, Holland, Fortuna, Fraley, Clausell, & Clarke, 2007), since it takes items from Hazan & Shaver (1987), Collins & Read (1990), as well as statements from the RQ. A wide variety of sub-scales has been derived from the RSQ. Kurdek (2002) confirms five combinations of distinct items: items from Hazan & Shaver (1987), Collins (1996), Simpson, Rholes, & Nelligan (1992), Feeney & Hohaus (2001) and Griffin & Bartholomew (1994a). Roisman et al. (2007) added two

more to these (Fraley & Bonanno, 2004; Creasey & Ladd, 2005). Apart from their changeable composition, divergence in the number of sub-scales is also significant: three sub-scales in the models of Hazan & Shaver (secure, avoidant and ambivalent styles) and Collins (close, depend and anxiety); four in Bartholomew's model (secure, preoccupied, dismissing and fearful prototypes) and two for the remainder (anxiety and avoidance). The present study constructs a *Scale of Preferences and Expectations in Close Interpersonal Relationships* (EPERIC) based on the RSQ and provides evidence of its validity and reliability. The reason for undertaking this study stems from the need for an instrument to assess adult attachment in close interpersonal relationships in general, not only between members of a couple, which also avoids the imprecision that the user of the RQ encounters when having to respond to four items combining multiple statements about each of them. For this reason, its application is questionable when proposed for use with people with a low to medium level of education. A questionnaire composed of independent statements in the style of the RSQ is found to be much more approachable. Placing our priority on comprehension, our aim has been, not to produce a version of the RSQ in Spanish, but rather to create a reliable and comprehensible instrument to evaluate adult attachment in people without a university education.

To compare the validity of our instrument, we made recourse to the RQ, but we also explored the relationship between the scores obtained using our scale (EPERIC) and the affective states and negative key life events that people face. This relationship should indicate the relevance of the scale to take account of differences in their ways of managing affection and dealing with important life events. Thus, our instrument must be able to take account of preferences and expectations related to the attachment style, as described in Shaver and Mikulincer (2008) and Wei, Vogel, Ku, & Zakalik (2005).

Method

Participants

A total of 594 people participated in this study, recruited using a cluster procedure by psychology and medical professionals at the universities of Oviedo and Almería, the Baures Foundation and CICOM (Centre for Communication Research). These professionals asked people to collaborate by responding to the questionnaires and then passing them to other people and acting as collecting points for the completed questionnaires. By this means, the aim was to achieve a population sample that was more heterogeneous than the normal sample of university students.

The sample consisted of 413 women and 181 men between 17 and 77 years old ($M = 32.58$; $DT = 13.4$). 43.9% were single and 51.9% lived with a partner (whether married or not); 2.8% were separated or divorced and 1.4% widowed. In terms of their level of education, 18% had studied to primary level, 23.6% secondary, 45.1% were still undertaking university studies and 13.3% were graduates or had studied to beyond degree level. With respect to occupation, 40.4% were students, 43.6% were in employment, 14.5% were unemployed or undertaking unpaid work, and 1.4% were in other situations.

Instruments

EPERIC was constructed from a version of the RSQ (Griffin & Bartholomew, 1994b) that has been translated and adapted

for Spain. The base material consisted of thirty items, each with a Likert-type response on a scale of 1 to 5, where 1 means “is nothing like what happens to me” and 5 “is very much like what happens to me”. The participant had to indicate, for each of the thirty statements, the degree to which the statement reflected their feelings in close relationships.

The *Cuestionario de Relación* (CR, or Relationships Questionnaire, RQ) by Alonso-Arbiol (2000) evaluated the four styles of attachment (secure, preoccupied, dismissing and fearful) by means of four items representing the prototype of each. The participant marked the degree to which the item reflected their preferred way of relating to other people on a scale of 1 to 7. In this way, four dimensional scores were obtained for each person - one for each attachment style. Using these scores, it was also possible to obtain factors of *concept of self* and *concept of others* following the formula of Griffin and Bartholomew (1994a) given later in this paper.

The *Escala de Afecto Positivo y Negativo* by Sánchez-Cánovas & Sánchez López (1994) (the Spanish version of *Positive and Negative Affects Schedule* by Watson, Clark, & Tellegen, 1988) evaluated the moods or states of mind experienced over the previous month on a five point scale. It gave scores on two sub-scales (positive and negative moods) of ten items each (adjectives expressing moods: *depressed, happy, decided, tense*, etc.). The internal consistency for the sample is indicated in table 1.

The *Survey of Life Experiences* by Kohn & Macdonald (1992), in its Spanish version (*Escala de Experiencias Vitales Recientes, or EEVR*) by Sandín, Chorot, Lostao, Joiner, Santed, & Valiente (1999), evaluated the presence of hassles and setbacks over the previous month by means of 51 items grouped in six areas with a four-point Likert scale. Table 1 shows the data for internal consistency.

Data analysis

Data analyses were done using the program packages FACTOR 8.02 (Lorenzo-Seva & Ferrando, 2006), SPSS version 17.0 and Mplus (Muthén & Muthén, 2006).

Firstly, a factorial analysis on the polychoric correlation matrix was performed using the FACTOR package, using the unweighted minimum squares procedure to extract the underlying structure of the participants' responses to the original thirty items. The procedure for determining the number of components was Parallel Analysis.

Instrument	Sub-scales	α
Affect schedule (N= 397)	(whole)	0.75
	Positive affect	0.86
	Negative affect	0.89
SRLE (N= 594)	(whole)	0.90
	Social and cultural difficulties	0.70
	Work	0.78
	Time pressure	0.79
	Social acceptability	0.73
	Finances	0.70
	Social victimization	0.58

Items with communalities of less than 0.09 were eliminated. Next, we carried out a confirmatory factor analysis (CFA) with the Mplus program on matrix of polychoric correlation and applying the Maximum Likelihood (ML) method (Satorra-Bentler, 2010). We used a cross-validation procedure, the first random sample consisting of 262 people and the second random sample also of 262 people. The first sample specifies the model proposed by the modification indices and the second sample checks the fit of the model specified. We used the following goodness-of-fit indices: Chi-square/df, RMSEA (root mean square error of approximation), SRMR (standardized root mean square residual), CFI (comparative fit index), and TLI (Tucker Lewis index). First of all, we used an absolute fit index, expressed by the quotient of the chi-squared statistic over degrees of freedom. A ratio of less than 5 has been proposed to indicate reasonable goodness of fit (Wheaton, Muthen, Alwin, & Summers, 1977). Also, two comparative indices (CFI and TLI) and two residual fit indices (SRMR and RMSEA) were used. Values around 0.90 for the first two, below 0.08 for the SRMR, and below 0.05 for the RMSEA were considered indicative of a good fit (Schreiber, Nora, Stage, Barlow, & King, 2006).

Internal consistency of the resulting scales were evaluated using the Cronbach α coefficient as well as the Ω coefficients based on polychoric correlations provided by the FACTOR program. Then, to obtain evidence of convergent validity, a subsample of 326 subjects was used to analyse the correlations (simple, partial and multiple) between the sub-scales of EPERIC and CR and the attachment prototypes. In addition, the relationships between the adult attachments reported by EPERIC were analysed, as well as the affects and reactions to stressful events experienced by the subjects. Pearson correlations were also calculated to examine relationships between age, level of education and attachment style; and the t-test was used to study the relationship between attachment and sex.

Results

Factorial validity

Before performing the factorial analysis of EPERIC, the sample bias of the thirty RSQ items was analysed by means of diagonal analysis of the anti-image correlation matrix. All of the items obtained moderate to optimal indices (MSA >0.74). The Kaiser-Meyer-Olkin index (KMO= 0.83) and Bartlett's sphericity test ($\chi^2_{231} = 2944.6$, $P < 0.001$) also indicate the suitability of the data matrix to meet the requirements of factorial analysis. The characteristics of the distribution (nine items had values of absolute asymmetry or kurtosis greater than 1) made it advisable to do the analysis using the matrix of polychoric correlations.

The factorial analysis using the Unweighted Minimum Squares procedure and Parallel Analysis to estimate the number of factors and then subjecting these to an oblimin rotation, suggested a solution with three factors (table 2). Items with the following features were eliminated: factorial saturations of between -0.30 and +0.30; factorial saturations similar in two or more categories; and an item-total correlation less than 0.30. These 22 remaining items grouped in three factors that explained 42.78% of the total variance. After applying an oblimin rotation, the first factor consisted of eleven items that evaluated *Fear of rejection or abandonment* (FRA) and explained 20.55% of the variance. The second factor grouped six items assessing *Desire for closeness*

(DC) in relationships, accounting for 11.16% of the variance. The third factor was denominated *Preference for independence* (PI) and comprised five items explaining 11.07% of the variance. The correlation between Factors 1 and 2 is 0.079, between Factors 1 and 3, it is 0.107 and between 2 and 3, 0.032. The indices S (0.97) and LS (0.38) indicated a high simplicity of the trifactorial

Internal consistency

The Cronbach alpha coefficients indicated high internal consistence: 0.80 for the entire questionnaire; 0.82 for the *FRA* sub-scale; 0.71 for *DC*; 0.73 for *PI*. The omega coefficients provided by FACTOR based on polychoric correlations were 0.854, 0.734 and 0.775.

Table 2
Rotated loading matrix (loadings larger than absolute .30 in bold face)

Items	F1 Fear of rejection or abandon.	F2 Desire for closeness	F3 Preference for independence
1. Me resulta difícil depender de otras personas	.152	.411	-.148
2. Para mí, es muy importante sentirme independiente	-.087	.659	.002
3. Me resulta muy fácil sentirme emocionalmente cerca de otras personas	-.118	.126	.475
4. Quiero unirme completamente a otra persona	.029	-.056	.625
5. Me preocupa que me hagan daño si me doy permiso para estar muy cerca de otras personas	.375	.131	.107
6. No estoy seguro/a de que las personas vayan a estar siempre ahí cuando las necesito	.545	.148	-.214
7. Quiero estar en una situación de intimidad emocional total con otras personas	.158	.067	.495
8. A menudo me preocupa que mis compañeros/as sentimentales no me quieran en realidad	.632	-.002	.098
9. Me resulta difícil confiar completamente en los demás	.479	.226	-.216
10. Quiero tener relaciones emocionalmente cercanas	.041	.082	.613
11. Me siento cómodo/a teniendo a otras personas dependiendo de mí	.234	-.188	.398
12. Me preocupa que los demás no me valoren tanto como yo les valoro a ellos	.465	.116	.201
13. La gente nunca está cuando yo la necesito	.643	-.029	-.205
14. A veces mi deseo de unirme completamente espanta a la gente	.593	-.202	-.013
15. Para mí es muy importante sentirme autosuficiente	-.050	.651	.157
16. A menudo me preocupa que mis compañeros/as sentimentales no quieran seguir conmigo	.672	-.106	.067
17. Prefiero no tener a otras personas dependiendo de mí	.232	.357	-.152
18. Me preocupa ser abandonado/a	.590	.043	.215
19. Encuentro que los demás están poco dispuestos a tener tanta intimidad conmigo como a mí me gustaría	.582	.001	.068
20. Prefiero no depender de los demás	.049	.733	-.019
21. Me preocupa que los demás no me acepten	.536	.060	.085
22. Me resulta relativamente fácil llegar a intimar con los otros	-.066	.149	.349
Variance explained (Total= 42.78%)	20.55%	11.16%	11.07%

solution. The value of the GFI was 0.98. The residues were distributed in quite a symmetrical way, with a mean of close to zero (0.0005) and a very low variance (0.0022). The value of RMSR was 0.0464 (Kelly's criterion= 0.0437). All these statistics indicated a satisfactory fit.

To test the fit of the 3-factor model found and compare it with the bifactorial model found in earlier studies, a CFA was performed using the Mplus program. Then we used a cross-validation procedure to check the fit of the model specified.

A comparison of the three-factor solution found and the solution closest to the Bartholomew and Horowitz model in two dimensions (which dictates that items relating to desire to closeness and preference for independence should be integrated into a single factor called avoidance), showed much poorer results for the two dimensional solution than for the three-factor one.

As can be seen from Table 3, which also includes the results of the crossed validation, most of the indices calculated showed an acceptable fit for the three-factor model: the quotient of Chi-square over degrees of freedom was less than 2; CFI and TLI were 0.88, RMSEA was 0.059 in the second sample, SRMR was lower than 0.08.

Table 3
Fit indices for the two and three factor models and cross validation results for the three factor model

	Chi²/df	CFI	TLI	RMSEA & CI	SRMR
Two factor model	1230.951/208	.630	.589	.097 [.092-.102]	.108
Three factor model	862.905/206	.762	.734	.078 [.073-.083]	.083
Sample 1 (N=262)	336.180/190	.903	.708	.054 [.045-.064]	.072
Sample 2 (N=262)	362.900/190	.885	.882	.059 [.050-.068]	.076
Chi²/df: Chi-Square divided degrees of freedom CFI: Comparative fit index TLI: Tucker-Lewis incremental fit index RMSEA & CI: root mean square error of approximation and 90% confidence interval of RMSEA SRMR: standardized root mean-square residual					

Evidence of validity

To compose the sub-scales, the mean scores for each individual were calculated for the corresponding items. The Pearson correlations were significant both between *FRA* and *DC* ($r=0.201$; $p<0.000$) and between *FRA* and *PI* ($r=0.217$; $p<0.000$), but were not significant between *DC* and *PI* ($r=0.023$; $p=0.577$) ($N=594$).

Next, the correlations between the three sub-scales and the concepts of self and of others obtained from the CR by applying the formula from Griffin & Bartholomew (1994a) were calculated:

$$\text{Concept of self} = (\text{Secure} + \text{Dismissing Prototype}) - (\text{Preoccupied} + \text{Fearful})$$

$$\text{Concept of others} = (\text{Secure} + \text{Preoccupied Prototype}) - (\text{Fearful} + \text{Dismissing})$$

The favourable *Concept of self* (positive formula scores) showed a significant negative correlation with *FRA* and positive with *PI*. The *Concept of others* correlated positively with *DC* and negatively with *PI* (table 4).

Once the influence of the other two sub-scales had been eliminated using partial correlations in the relationship between each sub-scale of EPERIC and the CR variables, it was found that the *DC* scale does contribute significantly to the prediction of the variable *Concept of self* ($r=0.154$, $p=0.005$) and likewise, the scale *FRA* with *Concept of others* ($r=-0.140$; $p=0.012$).

Multiple regression analysis using the step-by-step procedure revealed the three sub-scales of EPERIC to be predictors of

Concept of self ($R=0.490$) and *Concept of others* ($R=0.450$) according to the equations:

$$\begin{aligned} \text{Concept of self} &= 2.265 - 2.449FRA + 0.689DC + 0.954PI \\ \text{Concept of others} &= 0.769 - 0.572FRA + 1.618DC - 0.881PI \end{aligned}$$

In terms of attachment style, there were significant correlations between the prototypes and the three EPERIC scales (table 4).

Based on the fundamental role attributed to the attachment system in affective regulation, we made comparisons between the prediction of positive and negative affect and stressful events on the basis of CR and EPERIC in a sub-sample of 326 subjects. The multiple regression analysis yielded better results from our scale to predict both positive affect ($R=0.407$) and negative ($R=0.375$):

$$\begin{aligned} \text{Positive Affect} &= 2.587 + 0.388DC - 0.169FRA \\ \text{Negative Affect} &= 1.234 + 0.387FRA \end{aligned}$$

The values of the multiple correlation coefficient achieved from the CR were 0.283 and 0.288 respectively:

$$\begin{aligned} \text{Positive Affect} &= 2.979 + 0.089\text{Secure Prototype} - 0.051\text{Fearful Prototype} \\ \text{Negative Affect} &= 2.302 + 0.091\text{Preoccupied prototype} - 0.89\text{Secure Prototype} \end{aligned}$$

In terms of life events, the *FRA* sub-scale correlated significantly with the three sub-scales of the EEVR, as well as achieving this using the complete instrument. The prototypes and variables derived from the CR showed fewer significant correlations (see table 5).

Relationships between EPERIC and certain demographic variables

No significant differences were found in the *FRA* or *DC* scores obtained by men ($M=3.089$) and women ($M=3.267$), yet the *PI* score was significantly higher for women ($t_{339}=2.211$, $p=0.027$).

For men ($N=174$), there were no significant relationships between the scales obtained and some of the demographic variables, but there were for women ($N=394$). The correlation between level of education and *DC* was statistically significant ($r=0.140$; $p=0.007$); for older subjects, there were lower scores of *FRA* ($r=-0.169$; $p=0.001$) and higher *PI* ($r=0.103$; $p=0.042$).

Table 4
Correlations between the EPERIC sub-scales, the two factors and the four CR prototypes

	Fear of rejection or abandon.	Desire for closeness	Preference for independence
(Positive) Model of self	-.431**	.059	.123*
(Positive) Model of other	-.107	.363**	-.250**
Secure prototype	-.312**	.206**	.049
Dismissing prototype	-.013	-.194**	.358**
Preoccupied prototype	.380**	.119*	-.034
Fearful prototype	.289**	-.221**	.144**

** $p<0.001$; * $p<0.05$

Table 5
Correlations between the SRLE dimensions and the EPERIC and CR sub-scales ($N=327$)

	CR						EPERIC		
	Model of self	Model of other	Secure prototype	Dismissing prototype	Preoccupied prototype	Fearful prototype	FRA	DC	PI
Total	-.140*	-.026	-.101	-.036	.097	.087	.153**	.008	.074
Social & cultural difficulties	-.145**	-.065	-.167**	-.055	.044	.067	.186**	-.011	.047
Work	-.086	-.009	-.068	-.011	.078	.041	.059	.011	.032
Time pressure	-.053	.060	.014	-.033	.087	.014	.055	.049	.061
Social acceptability	-.113*	.030	-.029	-.128*	.027	.073	.030	.043	-.003
Finances	-.042	-.044	-.017	.031	.037	.076	.120*	-.008	.063
Social victimization	-.060	.014	-.007	-.001	.082	.050	.123*	.002	.042

** $p\leq 0.01$ * $p<0.05$

Discussion and conclusions

This study comprised the construction and analysis of the psychometric properties of EPERIC, its principal objective being to validate it against the Relationships Questionnaire (*Cuestionario de Relación*, CR) by Alonso-Arbiol (2000). EPERIC has a high internal consistency, as deduced from its high coefficient of reliability. The exploratory and confirmatory factorial analysis offer three factors that we have denominated *Fear of rejection or abandonment*, *Desire for closeness* and *Preference for independence*. The elevated scores in the first indicate that people fear being rejected, abandoned, deceived, scorned, betrayed or damaged in close relationships. The elevated scores in the *Desire for closeness* reveal a facility for intimacy and closeness to others, looking for close relationships and feeling comfortable with having other people dependent upon them. People with high scores in *Preference for independence* place importance on independence and self-sufficiency and are inclined not to depend on others nor have others dependent upon them.

Comparison with the CR provides evidence of validity for EPERIC. But contrary to what was expected, the *attachment system* in our instrument manifested not as two factors (Kurdek, 2002; Roisman et al., 2007), but as three (Hazan & Shaver, 1987; Collins, 1996), two of which barely correlate with each other: *Desire for closeness* and *Preference for independence*. As revealed by the regression analysis, *favourable concept of self* would be principally expressed by low *Fear of rejection or abandonment* and higher *Preference for independence* and *Desire for closeness*. A *favourable concept of others* would be translated as a greater *Desire for closeness* combined with a lower *Preference for independence* and *Fear of rejection or abandonment*.

With respect to the ability of EPERIC to take account of affective states and evaluation of life setbacks - both features of demonstrated relevance in relation to attachment styles (Shaver & Mikulincer, 2008; Wei et al., 2005), the results support the validity of the scale. Positive affects are related with lower scores for *Fear of rejection or abandonment* and with higher scores for *Desire for closeness*, while the negative affects are associated with elevated scores for *Fear of rejection or abandonment*. This factor is also correlated with the sub-scales of *Sociocultural difficulties*, *Finances* and *Social Victimization*, as well as with the total score for the EEVR questionnaire. Regression and correlation analyses demonstrate the superior predictive ability of the EPERIC sub-scales compared to variables derived from the CR. Traditionally, secure attachment has been associated with higher levels of psychological wellbeing, the dimensions of anxiety and avoidance with poorer wellbeing, and the anxiety dimension with magnification of life setbacks (Mikulincer & Shaver, 2003; Mallinckrodt & Wei, 2005; Shaver & Mikulincer, 2008; Ein-Dor, Mikulincer, Doron, & Shaver, 2010). The results obtained regarding the relationship between attachment and affective states or life setbacks are thus expected and support the idea that the dimensions of EPERIC take account of the activity of the attachment system.

Over the last twenty years, there has been a gradual move away from the theories of attachment of developmental psychology towards the clinical and social psychology. Without doubt, the study of the role that attachment plays in different psychopathological processes and in the success of psychotherapy depends on valid and reliable instruments that facilitate the investigation with adults in the clinical field. This study evaluated the psychometric

properties of a questionnaire that is easily applied to the general adult population for studying attachments relationships - not exclusively restricted to relationships between couples. Its initial relationship with the affective states and the evaluation of daily stresses can serve as a support for developing clinical studies in the Spanish population if the objective is to examine how attachment relationships can be involved in the origin of psychic dysfunction, or how attachment styles provide insight into which interventions will be efficient when selecting tailor-made treatments for the people seeking advice.

Nonetheless, the current study has certain limitations that must be rectified. Apart from the usual biases in sample composition (more women, more educated and younger people than in the population as a whole), there are two issues that deserve further examination. One is whether EPERIC provides stable characterisations over time, a question we intend to address in future research using repeated assessments at fixed time intervals by monitoring the occurrence of life events and how they modify the need for emotional support. The other issue is relevant not only at our scale but to all instruments assessing adult attachment; it relates to the fact that different items are answered evoking different people with whom relationships are maintained (Baldwin & Fehr, 1995; Baldwin, Keelan, Fehr, Enns, & Koh-Rangarajoo, 1996). The formulation of the instructions for EPERIC, imprecise with respect to the figure of attachment about whom the responses are given, could give rise to participants providing non-systematic information along with their responses, typical of their expectations and preferences in different close relationships (Collins & Read, 1990; Fraley, 2007). In future research, this question will be addressed by comparing profiles derived from EPERIC in personalized assessments, *i.e.*, involving different people with whom there are attachment ties (spouse, parents, children, close friends).

Our hypothesis regarding the plurality of relationships evoked goes further, as this could be the reason for the marked dispersion observed in the number of sub-scales and factors derived from the conventional instruments that measure attachment, such as the frequently-observed discrepancy between the attachment styles measured using questionnaires or using the structured interview - *Adult Attachment Interview* (AAI) (Roisman et al., 2007). The intervention of an interviewer probably achieves greater specificity in terms of the reference relationship to generate responses, as opposed to the greater diversity of relationships evoked in the course of completing a self-reporting questionnaire.

The fact that three scales result from our analysis should not lead one to consider that they evaluate Ainsworth's three well-known attachment styles (avoiding, secure, and anxious-ambivalent). If that were so, it would not be logical that the correlations between desire for closeness and preference for independence were positive. Our trifactorial model would better fit Collin's sub-scales (1996): dependence, anxiety and closeness. Our results also suggest that it might be a mistake to conceive the reports regarding fear of rejection or abandonment, desire for closeness or preference for independence as *direct reflections* of the activity of the attachment system. The internal working models, from which hyperactivation or disactivation of the attachment system derive, are originally characterised by tacit knowledge, by being non-declarative, and formulated narratively to give an account, be predictable and be acceptable to the relevant people (the figures of attachment, principally). At best, the responses to items in the questionnaire will be made based on recall of these narrative formulations. The

significant differences recorded in the mean score of men and women lead one to suspect that, in responding to the questionnaires, the influence of what is desirable or undesirable in a relationship is combined with the influence of their *conceptions* of how they

should be, as a function of gender, for example. The dramaturgical conceptualizations of personality (Pérez-Álvarez, 2005) or theories of self-discrepancy (Higgins, 1987) would be a good framework in which to understand this.

References

- Alonso-Arbiol, I. (2000). *Atxikimendu insegurua eta genero rolak pertsonarteko mendekotasunaren korrelatu gisa*. Unpublished doctoral thesis. Universidad del País Vasco, San Sebastián.
- Alonso-Arbiol, I., Balluerka, N., & Shaver, P.R. (2007). A Spanish version of the ECR adult attachment questionnaire. *Personal Relationships, 14*, 45-63.
- Baldwin, M.W., & Fehr, B. (1995). On instability of attachment style ratings. *Personal Relationships, 2*, 247-261.
- Baldwin, M.W., Keelan, J.P.R., Fehr, B., Enns, V., & Koh-Rangarajoo, E. (1996). Social-cognitive conceptualization of attachment working models: Availability and accessibility effects. *Journal of Personality and Social Psychology, 71*, 94-109.
- Bartholomew, K. (1990). Avoidance of intimacy: An attachment perspective. *Journal of Social and Personal Relationships, 7*, 147-178.
- Bartholomew, K., & Horowitz, L.M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226-244.
- Bowlby, J. (1969). *Attachment and loss, Vol. 1: Attachment*. New York: Basic Books.
- Collins, N.L. (1996). Working models of attachment: Implications for explanation, emotion, and behavior. *Journal of Personality and Social Psychology, 71*, 810-832.
- Collins, N.L., & Read, S.J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology, 58*, 644-663.
- Creasey, G., & Ladd, A. (2005). Generalized and specific attachment representations: Unique and interactive roles in predicting conflict behaviors in close relationships. *Personality and Social Psychology Bulletin, 31*, 1026-1038.
- Ein-Dor, T., Mikulincer, M., Doron, G., & Shaver, P.R. (2010). The attachment paradox: How can so many of us (the insecure ones) have no adaptive advantages? *Perspectives on Psychological Science, 5*, 123-141.
- Ezama, E., Alonso, Y., & Fontanil, Y. (2010). Pacientes, síntomas, trastornos, organicidad y psicopatología. *International Journal of Psychology and Psychological Therapy, 10*, 293-314.
- Feeney, J.A., & Hohaus, L. (2001). Attachment and spousal caregiving. *Personal Relationships, 8*, 21-39.
- Feeney, J.A., & Noller, P. (1996). *Adult attachment*. Thousand Oaks: Sage.
- Fraley, R.C. (2007). A connectionist approach to the organization and continuity of working models of attachment. *Journal of Personality, 75*, 1157-1180.
- Fraley, R.C., & Bonanno, G.A. (2004). Attachment and loss: A test of three competing models on the association between attachment-related avoidance and adaptation to bereavement. *Personality and Social Psychology Bulletin, 30*, 878-890.
- Griffin, D.W., & Bartholomew, K. (1994a). Models of the self and other: Fundamental dimensions underlying measures of adult attachment. *Journal of Personality and Social Psychology, 67*, 430-445.
- Griffin, D.W., & Bartholomew, K. (1994b). The metaphysics of measurement: The case of adult attachment. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships, Vol. 5: Attachment processes in adulthood* (pp. 17-52). London: Jessica Kingsley.
- Guerra Bustamante, J., Guerrero Barona, E., & León del Barco, B. (1997). Relación entre apego e inteligencia emocional en adolescentes. *Revista Electrónica de Motivación y Emoción, 13*, 34.
- Hazan, C., & Shaver, P.R. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology, 52*, 511-524.
- Higgins, E.T. (1987). Self-discrepancy: A theory relating self and affect. *Psychological Review, 94*, 319-340.
- Kohn, P., & Macdonald, J. (1992). The survey of life experiences: A decontaminated hassles scale for adults. *Journal of Behavioral Medicine, 15*, 221-236.
- Kurdek, L.A. (2002). On being insecure about the assessment of attachment styles. *Journal of Social and Personal Relationships, 19*, 811-834.
- Lorenzo-Seva, U., & Ferrando, P.J. (2006). FACTOR: A computer program to fit the exploratory factor analysis model. *Behavior Research Methods, 38*, 88-91.
- Mallinckrodt, B., & Wei, M. (2005). Attachment, social competencies, social support, and psychological distress. *Journal of Counseling Psychology, 52*, 358-367.
- Mikulincer, M., & Shaver, P.R. (2003). The attachment behavioral system in adulthood: Activation, psychodynamics, and interpersonal processes. *Advances in Experimental Social Psychology, 35*, 53-152.
- Muthén, L.K., & Muthén, B.O. (2006). *Mplus user's guide: Fourth edition*. Los Angeles: Muthén & Muthén.
- Pérez-Álvarez, M. (2005). Psicología del Quijote. *Psicothema, 17*, 303-310.
- Roisman, G.I., Holland, A., Fortuna K., Fraley, R.C., Clausell E., & Clarke, A. (2007). The Adult Attachment Interview and self-reports of attachment style: An empirical rapprochement. *Journal of Personality and Social Psychology, 92*, 678-697.
- Sánchez-Cánovas, J., & Sánchez López, M.P. (1994). *Psicología diferencial: diversidad e individualidad humanas*. Madrid: Ramón Areces.
- Sandín, B., Chorot, P., Lostao, L., Joiner, T.E., Santed, M.A., & Valiente, R.M. (1999). Escalas PANAS de afecto positivo y negativo: validación factorial y convergencia transcultural. *Psicothema, 11*, 37-51.
- Satorra, A., & Bentler, P.M. (2010). Ensuring positiveness of the scaled difference chi-square test statistic. *Psychometrika, 75*, 243-248.
- Schmitt, D.P., Alcalay, L., Allensworth, M., Allik, J., Ault, L., Austers, I., et al. (2004). Patterns and universals of adult romantic attachment across 62 cultural regions: Are models of self and of other pancultural construct? *Journal of Cross-Cultural Psychology, 35*, 367-402.
- Schreiber, J.B., Nora, A., Stage, F.K., Barlow, E.A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of Educational Research, 99*, 323-338.
- Shaver, P.R., & Fraley, R.C. (2010). *Self-report measures of adult attachment*. Retrieved from July 25, 2012, from <http://internal.psychology.illinois.edu/~rcfraley/measures/measures.html>.
- Shaver, P.R., & Mikulincer, M. (2008). Adult attachment and cognitive and affective reactions to positive and negative events. *Social and Personality Psychology Compass, 2*, 1844-1865.
- Simpson, J.A., Rholes, W.S., & Nelligan, J.S. (1992). Support seeking and support giving within couples in an anxiety-provoking situation: The role of attachment styles. *Journal of Personality and Social Psychology, 62*, 434-446.
- Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of Positive and Negative Affect: The PANAS Scales. *Journal of Personality and Social Psychology, 54*, 1063-1070.
- Wei, M., Vogel, D.L., Ku, T.Y., & Zakalik, R.A. (2005). Adult attachment, affect regulation, negative mood, and interpersonal problems: The mediating roles of emotional reactivity and emotional cutoff. *Journal of Counseling Psychology, 52*, 14-24.
- Wheaton, B., Muthen, B., Alwin, D.F., & Summers, G.F. (1977). Assessing reliability and stability in panel models. *Sociological Methodology, 8*, 84-136.

