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Spanish experimental version of the State-Trait Depression Questionnaire (ST-DEP: Trait sub-scale (T-DEP)

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ABSTRACT. This study presents the first validity and reliability data for the trait sub-scale, T-Dep, of the Spanish Experimental Version of the State and Trait Depression Questionnaire, ST-Dep: Euthymia and Dysthymia (Ritterband and Spielberger, 1996; Spielberger, 1999). The data were obtained from a sample of 264 university students. The internal consistency values for the T-Dep were high (.95). The convergent validity indexes for the Beck Depression Inventory (Beck, Rush, Shaw, and Emery, 1979), the Zung Self-Rating Depression Scale (Zung, 1965), and the Peñate Basic Depression Questionnaire (Peñate, 2001) were also high, with indexes ranging from .68 to .82. The correlation between State-Trait Anxiety Inventory (Spielberger, Gorsuch, and Luschene, 1970) and all scales used in this study, was high, once again indicating the usual overlapping between anxiety and depression seen in most depression inventories. The test-retest values from a three and one half month time interval (one hundred twelve days) are elevated (.71). Similarly, there appear to be significant gender differences for all the administered scales, with women obtaining the highest scores. A factorial analysis of the main axis revealed a principal factor for all of the constructed items in this experimental version of the T-Dep. The last, promax rotation showed two clear main factors similar in size: negative affectivity (Dysthymia) and positive affectivity (Euthymia).

KEY WORDS. State. Trait. Depression.

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RESUMEN. Este estudio presenta los primeros datos de validez y fiabilidad de la subescala rasgo, T-DEP, de la versión experimental española del cuestionario para la evaluación del componente afectivo de la depresión estado y rasgo, ST-DEP: Eutimia y Distimia (Ritterband y Spielberger, 1996; Spielberger, 1999). Los datos han sido obtenidos sobre una muestra de 264 universitarios. Los valores de consistencia interna del T-DEP fueron altos (0,95). Los índices de validez convergente con respecto al Inventario para la Depresión de Beck (Beck, Rush, Shaw y Emery, 1979), la Escala Autoaplicada de Depresión de Zung (Zung, 1965) y el Cuestionario Básico de Depresión de Peñate (Peñate, 2001) fueron también altos, con unos índices que oscilaron entre 0,68 y 0,82. La correlación entre el Inventario para la evaluación de la Ansiedad Estado-Rasgo (Spielberger, Gorsuch y Luschene, 1970) y todas las escalas empleadas en este trabajo para la evaluación de la depresión, son significativas, poniéndose de nuevo de relieve el solapamiento entre ansiedad y depresión. Los valores del test-retest para el T-DEP, con un intervalo de tres meses y medio (ciento doce días), son elevados (0,71). De igual forma, para todas las escala empleadas, aparecen diferencias significativas entre géneros, obteniendo las mujeres puntuaciones más altas. Un análisis factorial de ejes principales reveló la saturación de todos los ítem construidos para la versión experimental del T-DEP en un factor principal. La posterior rotación *promax* muestra dos claros factores principales semejantes en tamaño: afectividad negativa (Distimia) y afectividad positiva (Eutimia).

PALABRAS CLAVE. Estado. Rasgo. Depresión.

RESUMO. Este estudo apresenta os primeiros dados de validade e de fidelidade para a sub-escala de traço, T-DEP, da Versão Espanhola Experimental do Questionário de Estado e Traço de Depressão, ST-DEP: Eutimia e Distimia (Ritterband and Spielberger, 1996; Spielberger, 1999). Os dados foram obtidos a partir de uma amostra de 264 estudantes universitários. Os valores de consistência interna para o T-DEP foram altos (.95). Os índices de validade convergente para o Inventário de Depressão de Beck (Beck, Rush, Shaw, and Emery, 1979), a Escala de Auto-Avaliação da Depressão de Zung (Zung, 1965), e o Questionário Básico de Depressão de Peñate (Peñate, 2001 no prelo) também foram altos, com índices entre .68 e .82. A correlação entre o Inventário de Ansiedade Traço-Estado (Spielberger, Gorsuch, and Luschene, 1970) e todas as escalas usadas neste estudo, foram elevadas, indicando de novo uma sobreposição entre ansiedade e depressão. Os valores de teste-reteste após um intervalo de três meses e meio (112 dias) são elevados (.71). De forma similar, existem diferenças de género significativas para todas as escalas administradas, sendo que as mulheres obtêm os valores mais elevados. Uma análise factorial dos principais eixos revelaram um factor principal para todos os itens construídos nesta versão experimental do T-DEP. A última rotação promax mostrou dois factores principais claros similares no tamanho: afectividade negativa (Distimia) e afectividade positiva (Eutimia).

PALAVRAS CHAVE. Estado. Traço. Depressão.

Introduction

According to the DSM-IV (American Psychiatric Association, 1994), depression is defined as *periods* of persistent low self-esteem that can be manifested in forms of sadness, apathy, discouragement, etc., and a loss of interest or capability to feel pleasure. In order to diagnose a major depression episode, at least the sadness or loss of interest should be present *during no less than two weeks*, accompanied by at least three more symptoms referring to psychosomatic aspects (agitation or psychomotor slowness, insomnia or hypersomnia, etc.). Many instruments have been designed to adequately measure depression components (Friedman and Thase, 1995). Although each instrument focuses on a wide variety of contents (cognitive, somatic, etc.), the central aspect for evaluation should be the duration of the depressive symptoms. When considering the frequency of depressive symptoms it is surprising how the majority of the depression scales ask how *the subject has felt over the past week and up to the present day,* even though this time interval is not included in any of the main diagnostic manuals. This time interval is included in most of the common depression inventories and research scales used (Friedman and Thase, 1995; Gotlib and Cane, 1989; Piotrowski, 1996; Rabkin and Klein, 1987; Vázquez, 1995) and cited in (Ritterband, 1995): The Beck Depression Inventory (BDI revised; Beck, Rush, Shaw and Emery, 1979). It can also be seen in the Zung Self-Rating Depression Scale, SDS, Zung (1965, 1967, 1986); the Center for Epidemiological Studies Depression Scale, CES-D (Radloff, 1977), and in the Multiple Affect Adjective CheckList, MAACL, by Zuckerman and Lubins (1965, 1985). According to Ritterband (1995), these last instruments are the most common given the number of citations present in the scientific bibliography. The main objective of the BDI, the CES-D, and the SDS is to evaluate the *severity and intensity (state),* of depressive symptoms thereby making the frequency criteria less important. However, the response options for these instruments and the diagnostic manuals mainly refer to frequency. Beck and other authors (Beck and Steer, 1993; Vázquez and Sánz, 1997, 1999) point out that the BDI explores a characteristic similar to trait (frequency). Diverse authors (Katz, Shaw, Vallis, and Kaiser, 1995; Sacco, 1981) mention that these scales tend to confuse state and trait scores, and symptomatic aspects of depression. If the scores are not separated from the different explored areas, the problem of a large content variety in different scales (Snaith, 1993), could lead to an imprecise diagnosis due to the over representation of any one of the scales. Symptomatology such as insomnia or hypersomnia, weight gain or weight loss, etc., are all characteristics of depression, that can also be found in the majority of the anxiety and other psychological disorders. These symptoms can also be linked to specific organic rather than psychological disorders. For example, if the BDI was administeredto individuals with organic symptoms the scores would indicate high levels of depression even though the affective and anhedonia components, which research studies consider central elements of depression (Clark and Watson, 1991; Watson, Clark, and Carey, 1988; Watson, Clark, and Tellegen, 1988), would not necessarily be elevated.

All of the problems mentioned above in the evaluation for depression led the Spielberger group to develop the ST-DEP. An instrument designed to evaluate the affective components of depression, in terms of both the occurrence or frequency (trait) and intensity at the moment of the evaluation (state). In an early study, Ritterband and

Spielberger (1996) developed an experimental version for the assessment of the state-trait depression and they discovered two clear independent factors similar in size by using an oblique (promax) rotation on the main affective content factor. These two factors were titled dysthymia (presence of negative affectivity) and euthymia (presence of positive affectivity). These findings have led to a definitive 20-item scale, 10 items for state (5 dysthymia and 5 euthymia) and 10 items for trait (5 euthymia and 5 dysthymia).

The objective of this study following the procedure of the original scale (Ritterband and Spielberger, 1996), is the development of a valid Spanish adaptation of the state-trait depression questionnaire (Ritterband and Spielberger, 1996; Spielberger, 1999). Although the study for the state and trait sub-scale was carried out at the same time and with the same sample, the paper presented here focuses only on the psychometric properties of the trait sub-scale from an original pool of items, which forms the Spanish experimental version of the T-DEP.

Method

Subjects

The subjects were 264 university students (181 females, 83 males) majoring in different areas at the University of Granada. The mean age for women was 20.1 years with a standard deviation of 1.71 and the total female sample mean was 19 years. The mean age for men was 21.12 years with a standard deviation of 3.75 and the total male sample mean was 20 years.

Instruments

- We selected The *Beck Depression Inventory,* BDI, revised version (Beck *et al.,* 1979) and *Zung's Self-Rating Depression Scale,* SDS, (Zung, 1965, 1967, 1986), which according to Ritterband (1995) are the most commonly used instruments. Both of these inventories have been validated in a Spanish population. They both evaluate a quality similar to trait in that they ask how frequent the sypmtoms have been in the past week including today (Beck and Steer, 1993; Vázquez and Sanz, 1997, 1999). In addition we chose The *Peñate Basic Depression Questionnaire,* CBD, (Peñate, 2001), developed and validated in Spain, because it also measures the frequency of depressive symptoms. The scale has three main factors: negative affectivity, anhedonia, and low self-esteem, and does not include the somatic-behavioral components of depression. This last aspect made us select this instrument for mainly collecting affective content items. Lastly, the trait scale from the *State-Trait Anxiety Scale*, STAI (Spielberger, Gorsuch, and Luschene, 1970) was selected. The following section describes each one of the chosen instruments and the results obtained for the Spanish sample.

- Spanish Experimental Version for trait depression evaluation, T-DEP

Test specifications:

Objective: Identify the occurrence frequency (trait) for the affective component of Depression.

Area of Content*:* Negative affectivity (dysthymia) and positive affectivity (euthymia):

a) Dysthymia trait: Frequency of negative affectivity.

b) Euthymia trait: Frequency of positive affectivity.

The instructions ask each subject to choose one of the numbers next to the "*statement that people have used to describe themselves",* and to "*put a circle around the number of the statement that best indicates how he/she generally feels".*

The response options indicate frequency and offer four alternatives: 1)*"Almost never"* 2)*"Sometimes"* 3)*"Often"* and 4)*"Almost Always".*

In order to obtain the subject's score, the chosen response option (1, 2, etc.) is equivalent to the assigned scores for the items referring to dysthymia (negative affectivity). The reverse score (1= 4; 2= 3; 3= 2; 4= 1) is given to the items indicating euthymia. The final score for the trait sub-scale is obtained by adding the values, with a possible range of 26 to 104.

Item specification:

The experimental version of the test is composed of a total of 26 items (See Appendix 1), 13 for dysthymia and 13 for euthymia. The operative definition for dysthymia and euthymia are described below accompanied by the item number within parenthesis corresponding to each component.

a) Dystymia: A total of 13 items: to be unmotivated (2), to be unfortunate (3), to be unhappy (6), to feel gloomy (9), to feel apathetic (10), to feel down (12), to not feel like doing anything (15), to feel weak (17), to feel miserable (18), to be depressed (19), to be hopeless (21), to feel downhearted (22), to be sad (24).

b) Euthymia: A total of 13 items: to enjoy life (1), to feel whole/complete (4), to be optimistic (5), to feel good (7), to feel lucky (8), to be hopeful about the future (11), to feel alive (13), to be vivacious (14), to be happy (16), to be content (20), to do things that feel good (23), to be excited (25), to be full of energy (26).

- Beck Depression Inventory, BDI, revised version (Beck et al., 1979)

The scale contains a total of 21 items. Each item has four possible response options ranging from 0 (depression absence) to 3 (maximum depression), with a total test score ranging between 0 and 63. The instructions ask the subject to respond by circling the number (0, 1, 2, or 3) next to the one statement in each group that best describes how he/she has felt *during the past week, and including the present day*. The objective of the BDI is to evaluate the *severity* of the cognitive, affective, behavioral, and physiological symptoms of depression (Beck and Steer, 1987; Beck, Steer, and Garbin, 1988; Ibañez, Peñate, and González, 1997; Steer, Beck, and Garrison, 1986). The BDI reliability and validity have been widely substantiated in clinical, as well as normal samples (Beck *et al.,* 1988; Ritterband and Spielberger, 1996). An elevated alpha for internal consistency was observed in the test's Spanish validation (Sánz and Vazquez, 1998; Vazquez and Sánz, 1997, 1999), carried out in both clinical and normal populations, .83 and .90. The values of the test-retest range between .60 and .72 and the concurrent validity indexes range between .68 and .89. The Sánz and Vázquez (1998) study found low correlations for the divergent validity, ranging between .11 and .45, with different anxiety scales**.**

- *Zung Self-Rating depression scale, SDS* (Zung, 1965, 1967, 1986*)*

This scale is composed of 20 items and assesses the *severity* of depression. It analyzes affective components, as well as cognitive, psychomotor, and physiological-somatic components. The subjects completing this test should specify for each one of the items *"how long has each situation affected your self-esteem at the present moment, or more, during this last week"*. The subject must rate themselves on a 4 point frequency scale: 1) "None or little of the time", 2) "Some of the time" 3) "Good part of the time", and 4) "Most or all of the time". The subjects' response ratings of 1 to 4 are summed for each of the 20 items, yielding a possible total score range of 20 to 80. The normal and clinical populations in the Spanish adaptation (Conde, Escriba, and Izquierdo, 1970a, 1970b; Conde and Esteba, 1974, 1975a, 1975b, 1976a, 1976b), support the test's high validity and reliability, reaching alpha values around .85, similar to the .86 value found by Ritterband and Spielberger (1996) for the normal sample. Zung (1967, 1969) and Marone and Lubin (1968) found moderate to high correlations between the SDS and other instruments, such as the BDI, the MMPI depression scale, and the Depression Adjective Checklist. Ritterband and Spielberger (1996) note a correlation of .77 with the BDI and .83 with the CES-D.

- *The State-trait Anxiety Inventory (STAI) trait sub-scale* (Spielberger *et al.,* 1970)

The STAI evaluates state anxiety and trait anxiety by means of two sub-scales, each composed of 20 items, and each item has four response options. In the trait anxiety sub-scale instructions, the subject should mark "*the number from 0 to 3 that best indicates how you generally feel, in the majority of occasions"* with the response options "Almost never", "Sometimes", "Often", "Almost always". The statistical data concerning the original test support its use (Spielberger *et al.,* 1970). In the Spanish adaptation of this scale (Bermúdez, 1978a, 1978b), the internal consistency values for normal and clinical samples are similar to those of the original study, ranging between .82 and .92, which also occurs in the test-retest values between .70 and .80. The concurrent and divergent validity indexes obtained for the Spanish adaptation corroborate the STAI's high psychometric power (Bermúdez, 1978a, 1978b; Iglesias, 1982; Sandín, 1981; Urraca, 1981).

- *Basic Depression Questionnaire, CBD* (Peñate, 2001)

The CBD was recently elaborated in the University of Laguna, Spain. The test is made up of 21 items and each item has four response options. The response options follow an ordinal scale based on the DSM-IV diagnostic criteria and consist of: "Always/years", "A lot/months", "Sometimes/weeks", "Never/rarely". The questionnaire evaluates the trait quality while also considering the time criteria of the DSM-IV for diagnosis. The subject's score is calculated by transforming the ordinal scale into an interval scale in which "0" refers to Never/rarely and "3" refers to Always/years, with a possible total score ranging from 0 to 63. The test's objective is to evaluate the following depression components: affect, sadness, loss of interest, and self-esteem. The Peñate group, based on the intercomponent covariation model as the distinctive depression element, points out that there exists a true covariation between sadness, loss of interest and low self-

esteem. This covariation was found by performing a second order factorial rotation, a stable monofactorial structure between studies with a congruency coefficient of .95. The Peñate group elaborated the definitive questionnaire from this second order factorial structure. The questionnaire has a total of 21 items taken from the original 90 items of the first analyses. The CBD demonstrates an alpha coefficient of .92 for internal consistency and a test-retest consistency of .82. The instrument shows correlations of .65 with the BDI and elevated discriminant evidence with the anxiety trait. The correlations between the STAI trait and the CBD, based on previous subsamples from the CBD's 25th 33rd 66th and 75th percentiles are of .22 for the 25th percentile, .39 for the 33rd percentile, .07 for the 66th percentile, and .02 for the 75th percentile. The CBD also adequately differentiates between depressives and non-depressives, and between different depression subgroups classified by the number of depression episodes (one episode, two, three or more, and dysthymia).

Procedure

Participants were tested during normal class hours. The experimenter presented his/herself and then explained the objective of the study, providing each participant with standard written instructions (Appendix 1). Upon reading the instructions, those subjects who decided to participate in the study were provided with the questionnaires specified in the instruments section. The instructions listed in Appendix 2 were also administered with the questionnaires. Upon completion of the questionnaires, a separate series of questionnaires corresponding to the state sub-scale analysis were provided with the previously mentioned material. However, the results of these scales are not reported in this paper.

Results

The means, standard deviations, and alpha coefficients for the T-DEP and other depression scales are reported in Table 1. The result of the t-test analysis on gender differences are also reported**.** Females obtained a significantly higher total T-DEP score than the males ($p < .001$). The females scored significantly higher than males on the BDI, ZDS ($p < .001$), and the CBD ($p < .01$). The T-DEP alpha coefficients (.95 for male and female) indicate a high internal consistency. The values for the BDI (.86 for female; .80 for male), the SDS (.77 for female and male), and the CBD (.92 for female and male) are equally high. The T-DEP reliability was also calculated by applying a test-retest on a total of 82 subjects (31.06% of the total sample; 20 male and 62 female). The time interval for this test-retest was of three and one-half months (one-hundred twelve days) and the resulting value was .71 ($p < .01$).

TABLE 1. Means, Standard deviations, alpha coefficients for the T-DEP, SDS, BDI, and CBD and gender difference test.

	Female (N= 181)			Male (N= 83)			
Scales	Mean	SD	Alpha	Mean	SD	Alpha	t-test
T-DEP	51.56	14.66	.95	43.22	13.13	.95	4.42[a]
BDI	10.31	7.44	.86	6.36	5.20	.80	4.37[a]
SDS	41.33	7.48	.77	36.26	6.91	.77	5.22[a]
CBD	13.51	10.97	.92	8.66	9.46	.92	3.17[b]

[a] $p < .001$ [b] $p < .01$

The correlations between the different depression measures can be observed in Table 2, with separated calculations for male and female. The T-DEP correlations with the remaining scales are significant ($p < .001$) for both genders, with values ranging between .68 and .82 (r mean= .75). The highest correlations are found for both genders between the T-DEP and the CBD (.82 for male and female).

TABLE 2. T-DEP Correlations with the BDI, SDS, and CBD for male and female.

		Male (N=83)			
		T-DEP	BDI	SDS	CBD
Female (N=181)	T-DEP	****	.78[a]	.68[a]	.82[a]
	BDI	.78[a]	****	.74[a]	.72[a]
	SDS	.77[a]	.78[a]	****	.67[a]
	CBD	.80[a]	.79[a]	.74[a]	****

[a] $p < .001$

The data for the correlation between the different depression scales and the STAI anxiety trait sub-scale are presented in Table 3. The correlation between T-DEP and STAI trait is highly significant (.80 for female; .82 for male; $p < .001$). The remaining depression measures also significantly correlate with the STAI anxiety trait sub-scale for both men and women.

TABLE 3. Correlations between the STAI-T and the T-DEP, BDI, SDS, and CBD for men and women.

		T-DEP	BDI	SDS	CBD
Female (N=181)	STAI-T	.80[a]	.75[a]	.78[a]	.80[a]
Male (N=83)		.82[a]	.74[a]	.71[a]	.77[a]

[a] $p < .001$

Factor structure analysis

The results of the unrotated principal axis factorial analysis on the pool of items constructed for the T-DEP experimental version are reported in Table 4. An important factor for both genders was found that explains 47.60% of the variance in females and 49.05% in males. This main factor is saturated in all of the T-DEP experimental version items for female. Only one item (I am unhappy) is found for male, in which the saturation is less than .30. Three additional small factors with low saturation weights appear for female, with the highest values ranging between .31 and .39. The total

TABLE 4. Principal axis factor analysis of the spanish experimental T-DEP.

	Principal Axis Factors									
	Factor 1		*Factor 2*		*Factor 3*		*Factor 4*		*Factor 5*	
Item[1]	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**
20. I am content	.80	.83								
14. I am vivacious	.80	.81								
7. I feel good	.79	.89								
4. I feel whole/complete	.77	.82								
12. I feel down	.75	.79	.32							
25. I am excited	.74	.77	-.32							
24. I am sad	.73	.75	.34							
5. I am optimistic	.72	.79		-.37						
1. I enjoy life	.71	.77					-.35			
16. I am happy	.70	.85								
9. I feel gloomy	.70	.69	.32							
18. I feel miserable	.70	.31	.31	.32	-.32			.44		.33
13. I feel alive	.70	.71								
26. I am full of energy	.65	.77								
8. I feel lucky	.68	.55	-.32			.33				
3. I am unfortunate	.67	.60								
19. I am depressed	.64	.62						.41		
6. I am unhappy	.64					.54				
10. I feel apathetic	.63	.57								
23. There are things that make me feel good	.62	.63				.33				
2. I am unmotivated	.62	.79								
15. I don't feel like doing anything	.59	.58								
11. I am hopeful about the future	.57	.66		-.42						
17. I feel weak	.55	.64	.39	.35				.36		
22. I feel downhearted	.52	.60	.34							
21. I am hopeless	.46	.48		.41						
% explained variance	47.60	49.05	8.44	6.56	2.82	5.35	4.41	4.80		3.86
% total explained variance	64.42	69.63								

[1] The items are rank-ordered on the basis of the descending magnitude of their dominant salient (> o =.30) loadings for females.

variance explained for these three factors is of 15.67%, of which 8.44% is the largest variance percentage explaining one single factor. There also exist four small factors with low saturation weights for the male, although they are somewhat higher than those for the female. The total variance explained for these four factors is of 20.57%, with the highest variance percentage explained for one single factor of 6.56%.

The items that obtained a saturation > .40 on the observed secondary factors for the main axis analysis were eliminated in order to perform the oblique (promax) rotation. Two clear main factors emerged with the oblique (promax) rotation of the factors observed in the previous analysis. As can be seen in Table 5, the items referring to the positive affectivity component of depression (Euthymia) constitute one of these factors. The other factor captures the more characteristic items of depression, the negative affectivity component (Dysthymia). The women saturate a total of 12 items (saturation weights between .35 and .78) in the Euthymia factor and 12 other items in the Dysthymia factor (saturation between .41 and .74). The men also saturate 12 items in the Euthymia factor (weights between .34 and .91), but saturate only 9 items in the Dysthymia factor (weights between .32 and .77). Apart from the two main factors found for both sexes (Euthymia and Dysthymia), there appear to be other smaller weight factors, in which a small number of negative, as well as positive, affectivity items are saturated. The item-rest correlation values demonstrate highly significant indexes for all items ($p <$ .001)

TABLE 5. Saturation weights for the promax rotation analysis and item-rest correlations for the euthymia (Factor 1) and dysthymia (Factor 2) factors.

	Promax Rotation									
	Factor 1		*Factor 2*		*Factor 3*		*Factor 4*		*r item-total*[2]	
Item[1]	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**
Euthymia										
8. I feel lucky	.78	.63							.70 *	.60 *
16. I am happy	.77	.62							.71 *	.64 *
20. I am content	.71	.77							.80 *	.60 *
14. I am vivacious	.70	.61					.35		.80 *	.81 *
5. I am optimistic	.69	.34				.84			.73 *	.79 *
13. I feel alive	.64	.37							.71 *	.73 *
7. I feel good	.63	.43				.32			.79 *	.88 *
11. I am hopeful about the future	.60	**		**		**			.60 *	**
4. I feel whole/complete	.55	.37			.37	.47			.79 *	.82 *
25. I am excited	41	.64			.46				.75 *	.79 *
26. I am full of energy	.38	.71					.39		.71 *	.61 *
1. I enjoy life	.35	.66			.58				.72 *	.79 *
23. I do things that make me feel good		.91			.51				.64 *	.74 *
Dysthymia										
18. I feel miserable		**	.74	**		**			.70 *	**
17. I feel weak			.71	.62					.57 *	.83 *
24. I am sad			.68	.60	.30				.73 *	.78 *
9. I feel gloomy			.67	.77					.71 *	.68 *
3. I am unfortunate			.65	.32		.64			.68 *	.61 *
12. I feel down			.64	.63			.31		.76 *	.78 *
22. I feel downhearted			.57	.61			.33		.54 *	.66 *
19. I am depressed		**	.55	**		**	.31		.65 *	**
6. I am unhappy		**	.53	**		**			.65 *	**
10. I feel apathetic			.52	.62					.65 *	.60 *
15. I don't feel like doing anything			.42	.32		.75	.41		.61 *	.85 *
21. I am hopeless		**	.41	**		**			.49 *	**
2. I am unmotivated				.43		.35	.46		.63 *	.80 *

[1] The items are listed in descending magnitude according to dominant salient loadings for females in Euthymia factor. Saturations > o = .30 are included. [2] Item-total correlations and significance levels* p > .001. ** Items excluded from the promax rotation analysis for presenting salient loadings > .40 in secondary factors according to the principal axis analysis.

The mean and standard deviation for each item formed from the two main factors found by oblique (promax) rotation, and the total score and two sub-scale scores (Euthymia and Dysthymia) of the T-DEP found are reported in Table 6. The item-rest correlations, the F values for gender differences, and the alpha values for the T-DEP, Euthymia, and Dysthymia are also presented in Table 6.

TABLE 6. Means, standard deviations and alpha coefficients for the T-DEP, dysthymia-euthymia sub-scales and each one of the items found by promax rotation.

	F		M		Alpha if Rs[2] Sub-scale		F[3]
Items[1]	Mean	SD	Mean	SD	F	M	Sig.
T-DEP	47.35	13.66	36.30	11.67	.95	.96	6.55[b]
TEuthymia	26.95	8.32	22.89	7.85	.94	.95	1.95
TDysthymia	20.40	6.54	13.40	4.38	.92	.89	16.24[a]
Euthymia							
8. I feel lucky	2.44	.97	2.38	.99	.79	.64	.00
16. I am happy	2.14	.90	1.77	.85	.77	.87	.22
20. I am content	2.05	.84	1.75	.81	.84	.87	.19
14. I am vivacious	2.25	.84	1.79	.76	.84	.81	2.25
5. I am optimistic	2.32	.92	1.95	.84	.79	.82	4.25[b]
13. I feel alive	2.01	.88	1.56	.81	.77	.73	.00
7. I feel good	2.11	.86	1.73	.76	.83	.87	.45
11. I am hopeful about the future	2.04	.89			.67	**	
4. I feel whole/complete	2.62	.92	2.31	.88	.83	.83	.60
25. I am excited	2.54	.85	2.17	.79	.81	.81	3.78
26. I am full of energy	2.51	.89	2.02	.91	.76	.82	1.64
1. I enjoy life	1.91	.83	1.67	.73	.73	.82	.18
23. I do things that make me feel good			1.76	.67	**	.70	
Dysthymia							
18. I feel miserable	1.53	.76			.77	**	
17. I feel weak	1.93	.86	1.54	.67	.71	.73	.51
24. I am sad	1.49	.72	1.49	.57	.81	.80	.08
9. I feel gloomy	1.94	.82	1.53	.67	.78	.76	.01
3. I am unfortunate	1.59	.73	1.27	.57	.73	.67	16.50[a]
12. I feel down	2.06	.81	1.58	.72	.82	.85	.32
22. I feel downhearted	1.49	.72	1.22	.47	.66	.68	27.01[a]
19. I am depressed	1.35	.64			.72	**	
6. I am unhappy	1.54	.71			.67	**	
10. I feel apathetic	1.78	.83	1.65	.86	.72	.69	.51
15. I don't feel like doing anything	1.70	.70	1.39	.58	.65	.62	3.13
21. I am hopeless	1.46	.69			.55	**	
2. I am unmotivated			1.72	.79	**	.83	

1 The items are listed in descending magnitude according to their dominant salient in the female's euthymia factor (Table 6).[2] Alpha coefficients for the Trait scale and Euthymia and Dysthymia sub-scales, and item-rest correlations separating the Euthymia and Dysthymia items.[3] F values and significance levels: [a] $p<.001$. [b] $p<.05$** excluded items for saturation absence in the promax rotation in main Euthymia and Dysthymia factors.

As can be clearly seen in Table 6, the T-DEP experimental version and its two sub-scales found by promax rotation, demonstrate high levels of internal consistency for male, as well as female (between .89 and .96). The item-rest correlations are significant ($p < .001$) in all of the analyzed cases and the gender differences are significant for the T-DEP ($p < .05$) and the Dysthymia sub-scale ($p < .001$).

Discussion

This study presents the first reliability and validity data for the Spanish experimental version of the ST-DEP, trait sub-scale (T-DEP). The original ST-DEP (Ritterband and Spielberger, 1996; Spielberger, 1999) measure was not designed to diagnose depression. Its objective was to evaluate the affective depression component. The first studies using the measure were performed on a normal population. The study presented here followed the same Ritterband and Spielberger procedure (1996), and was performed on a university sample. The results have demonstrated some adequate initial psychometric properties for the Spanish experimental version of the ST-DEP trait scale (T-DEP).

The T-DEP consistency has been quite high for both males and females (.95 in both cases). Ritterband and Spielberger (1996) found values of .96 for females and .97 for males in their T-DEP experimental version. As can be observed, the data are similar to the data found in this study. The T-DEP is the instrument that has demonstrated the best internal consistency with values very similar to those of the CBD. The BDI and the SDS probe psychosomatic, cognitive, and affective components. On the other hand the CBD item content mainly consist of affective and loss of interest. The Spanish experimental version of the T-DEP, like the original version, focuses only on one component of depression: affectivity. Since the internal consistency is an index demonstrating subject response stability throughout the length of the test, it is possible that the T-DEP and CBD internal consistency values reflect a more homogenous content. The remaining scales (SDS and BDI) also reach high consistency indexes similar to those employing the BDI (Vázquez and Sánz, 1997; Sánz and Vázquez, 1998) or the SDS (Conde *et al.,* 1970a, 1970b) in the Spanish samples. The values obtained in our study in this last case were somewhat lower. The test-retest analysis with a broad time interval (three and one-half months) revealed the high T-DEP score stability (.71), as was expected for a scale in which the subject is asked how he/she generally feels the majority of the time.

The gender difference analyses demonstrated significant levels for all the depression scales employed. In all the results Females scored higher than males. There are normally no gender differences on the incidence of depression between male and female until after completion of the adolescence stage (Nolen-Hoeksema, 1987). From this point on, the number of depression cases in women is always greater than in men (Vázquez and Sánz, 1995). Ritterband and Spielberger (1996) did not find significant differences in the T-DEP for males and females**.** The study presented here, although using the T-DEP and other scales, presents data contrary to the results obtained by Ritterband and Spielberger (1996).

The correlations between the T-DEP and CBD scales are the highest for both male (.82) and female (.80). These correlations, together with those found for the remaining

depression measures, (BDI and SDS) provide high evidence for T-DEP convergent validity. In their study, Ritterband and Spielberger (1996) found higher correlations between the T-DEP and the SDS (.87 for male; .88 for female) than in our study (.68 for male; .77 for female). The correlations between the T-DEP and the BDI for the original T-DEP version (.78 for female; .81 for male) are similar to those presented here (.75 for female; .78 for male). It is also important to mention the high correlation values found between the STAI trait sub-scale and the administered depression measures, which are highly significant in all cases ($p < .001$). The problem of high correlations between anxiety and depression measures has been observed in previous investigations. Spielberger (1983) points out that clinically depressed patients generally score higher on anxiety measures than anxiety disorder patients. In addition, we must not forget that many of the STAI items contain depressive content ("I feel sad (melancholic)", "I feel like crying", "I am happy", etc). In their original study, Ritterband and Spielberger (1996) found greater values (.84 for female; .90 for male) for the correlation between the T-DEP and the STPI anxiety trait scale than those presented here. However, the correlations with the instruments' remaining scales indicate that the T-DEP presents adequate divergent validity values. Future studies will clarify this aspect for the T-DEP Spanish experimental version by using the STPI (Spielberger *et al.,* 1979), as in the original study.

The factorial analyses performed on the pool of items created for the T-DEP Spanish experimental version have demonstrated, through a principal axis analysis, an important factor capable of explaining 47.60% of the variance in female and 49.05% in male. This factor was saturated in all of the constructed items except for men in the item "I am unhappy". Like Ritterband and Spielberger (1996), two clear and equally sized factors emerged in performing the promax rotation on this first analysis: Euthymia (positive affectivity) and Dysthymia (negative affectivity). The results support the scale's construct validity and the items that were first developed to detect the affective component of depression in its negative (Dysthymia) and positive (Euthymia) manifestations. Other smaller sized factors, in which a small number of both negative and positive affectivity items are saturated, appear together with the two main factors found for both genders (Euthymia and Dysthymia). This result is normal, since it also occurred in the principal axis analysis. It is also important to consider that in the development of the pool of items for the T-DEP experimental version there are many items that appear to be synonimous. The objective is to identify those items that best register and measure a dimension. This phenomenon simply deals with high and similar saturation levels of different items in one same factor as a result of sharing the same meaning. This also excludes other items from this factor because of the strong relation ship between synonyms, although it is possible that they "measure" the same construct. The explained phenomenon provoked by the same meaning of different items is clear if we observe Table 5 and the items included in the secondary factors. The items that best measure the Euthymia dimension and the state and trait Dysthymia will be selected from the different studies conducted in order to adapt the ST-DEP in Spain.

The internal consistency for the two sub-scales (Euthymia and Dysthymia) and (T-DEP) was both separately and jointly analyzed from the saturated items in the promax

rotations for the above mentioned principal factors. The analysis revealed very important internal consistency indexes for all involved cases and significant item-rest correlation values for all items. The values found in this study are similar to those found by the Spielberger group (1999).

The objective of this investigation was an attempt to correct the observed defects in depression evaluation as delineated by different authors (Katz *et al.,* 1995; Sacco, 1981). The data presented here together with the Spielberger group's original scale results are promising. They point to the possibility of developing a scale not only capable of measuring the affective components of depression an important measure, capable of registering the affective components of depression but their intensity as well as their frequency, in a valid and reliable way.

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APPENDIX 1. Pool of items for the spanish experimental version of the T-DEP.

1. I enjoy life / *Disfruto de la vida*
2. I am unmotivated / *Estoy desmotivado/a*
3. I am unfortunate / *Me siento desgraciado/a*
4. I feel whole/complete / *Me siento pleno*
5. I am optimistic / *Estoy ilusionado/a*
6. I am unhappy / *Soy infeliz*
7. I feel good / *Me siento bien*
8. I feel lucky / *Me siento dichoso/a*
9. I feel gloomy / *Estoy apenado/a*
10. I feel apathetic / *Me siento apático/a*
11. I am hopeful about the future / *Tengo esperanzas sobre el futuro*
12. I feel down / *Estoy decaido/a*
13. I feel alive / *Me siento vivo/a*
14. I am vivacious / *Estoy animado/a*
15. I don't feel like doing anything / *No tengo ganas de nada*
16. I am happy / *Soy feliz*
17. I feel weak / *Me siento débil*
18. I feel miserable / *Me siento desdichado/a*
19. I am depressed / *Estoy hundido/a*
20. I am content / *Estoy contento/a*
21. I am hopeless / *Estoy desesperado/a*
22. I feel downhearted / *Estoy abatido/a*
23. I do things that make me feel good / *Hago cosas que me divierten*
24. I am sad / *Estoy triste*
25. I am excited / *Estoy entusiasmado/a*
26. I am full of energy / *Me siento enérgico/a*

APPENDIX 2. General instructions administered to the subjects before starting the evaluation.

A study dealing with the emotions of the university students is being carried out in the University of Granada. **To achieve the objectives of this study, we need your assistance.** We would deeply appreciate your participation so that we can learn more about university students' emotions**.** Your assistance is completely voluntary and **you can refuse to participate or to abandon the study at any time**.

If you decide to participate in the study, you will be administered a series of questionnaires. Your task will be simple and will consist of filling out each item of the questionnaire. We ask that you complete the questionnaires with all truthfulness, as your responses will be completely anonymous and confidential. We also ask that you concentrate while filling out each and every one of the questionnaires.

If you decide to participate in the described study, we would like to thank you in advance for your participation.

Do you have any questions? If so, please ask them at this time.

Thank you for your assistance.

APPENDIX 3. Instructions presented with the booklet of questionnaires.

You will shortly be presented with a series of numbered questionnaires (Questionnaire 1, Questionnaire 2, etc). **Your task is to fill out each one of these** questionnaires in the order that they appear and without stopping to review any of your responses. **Each one of the questionnaires is presented with its own instructions. Read them carefully and complete the questionnaire as indicated.**

In order to respond to what you are asked in each questionnaire, a separate booklet will be provided (Response Booklet-1). Within this booklet there appears an answer sheet for each one of the questionnaires included in the "Questionnaire Booklet". The answer sheets are also numbered (answer sheet for questionnaire 1, answer sheet for questionnaire 2, etc.). You should answer Questionnaire 1 on the answer sheet for questionnaire 1, Questionnaire 2 on the answer sheet for questionnaire 2, until all of the questionnaires are completed. There is no need to write anything in the "Questionnaire Booklet".

The first questionnaire appears on the following page. Before you begin, open the "Response Booklet" and fill out the personal data. We remind you once again that **the confidentiality of your responses is completely guaranteed.** Once you have filled out all of the personal data section, you can begin with the questionnaires. **Thank you very much.**