

Measuring experiential avoidance and psychological inflexibility: The Spanish version of the Acceptance and Action Questionnaire - II

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Abstract

Background: Experiential avoidance and psychological inflexibility have been recently found to be important constructs related to a wide range of psychological disorders and quality of life. The current study presents psychometric and factor structure data concerning the Spanish translation of a general measure of both constructs: the Acceptance and Action Questionnaire - II (AAQ-II). **Method:** Six samples, with a total of 712 participants, from several independent studies were analyzed. **Results:** Data were very similar to the ones obtained in the original AAQ-II version. The internal consistency across the different samples was good (between $\alpha = .75$ and $\alpha = .93$). The differences between clinical and nonclinical samples were statistically significant and the overall factor analysis yielded to a one-factor solution. The AAQ-II scores were significantly related to general psychopathology and quality of life measures. **Conclusions:** This Spanish translation of the AAQ-II emerges as a reliable and valid measure of experiential avoidance and psychological inflexibility.

Keywords: Acceptance and action questionnaire, experiential avoidance, psychological inflexibility, acceptance and commitment therapy.

Resumen

Midiendo la evitación experiencial y la inflexibilidad psicológica: versión española del Cuestionario de Aceptación y Acción - II. Antecedentes: investigaciones recientes han encontrado que la evitación experiencial y la inflexibilidad psicológica son constructos importantes que están relacionados con un amplio rango de trastornos psicológicos y la calidad de vida. Este estudio presenta datos de las propiedades psicométricas y la estructura factorial de la traducción al español de una medida de ambos conceptos: el Cuestionario de Aceptación y Acción - II (AAQ-II). **Método:** se analizaron 6 muestras, con un total de 712 participantes, procedentes de varios estudios independientes. **Resultados:** los datos obtenidos fueron muy similares a los encontrados en la versión original del AAQ-II. La consistencia interna medida a través de las distintas muestras fue buena (entre $\alpha = .75$ y $\alpha = .93$). Las diferencias entre las muestras clínicas y no clínicas fueron estadísticamente significativas, y el análisis factorial efectuado sobre el total de las seis muestras arrojó una solución unifactorial. Las puntuaciones en el AAQ-II estuvieron significativamente relacionadas con medidas generales de psicopatología y de calidad de vida. **Conclusiones:** la presente traducción del AAQ-II se muestra como una medida válida y fiable de la evitación experiencial e inflexibilidad psicológica.

Palabras clave: cuestionario de aceptación y acción, evitación experiencial, inflexibilidad psicológica, terapia de aceptación y compromiso.

Experiential avoidance refers to the occurrence of deliberate efforts to avoid and/or escape from private events such as affects, thoughts, memories and bodily sensations which are experienced as aversive, even when doing so leads to actions that are inconsistent with one's values and goals (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). The pernicious role of experiential avoidance has been especially emphasized by the model of psychopathology advocated by *Acceptance and Commitment Therapy* (ACT; Hayes, Strosahl, & Wilson, 1999), which probably is the third wave therapy with more empirical evidence (e.g., Hayes, Luoma, Bond, Masuda, & Lillis, 2006; Ruiz, 2010).

During the last years, the ACT model has proposed psychological inflexibility as a broader concept than experiential avoidance because it involves negative private experiences but also neutral and positive ones. Psychological inflexibility entails the dominance of private experiences over chosen values and contingencies in guiding action (Bond et al., 2011); therefore, it contains the concept of experiential avoidance. Psychological inflexibility has become the core of the ACT model of psychopathology and behavioral ineffectiveness. Accordingly, the aim of ACT is to promote psychological flexibility defined as the ability to be in contact with the private experiences that surface in the present moment without needing to avoid and/or escape from them and to adjust the behavior according to what the situation requires in order to pursue valued ends.

There is presently a huge amount of empirical evidence supporting the maladaptive role of experiential avoidance/psychological inflexibility (see Hayes et al., 2006; Ruiz, 2010 for detailed reviews). For instance, they have been systematically

proved: (a) to be strongly positively correlated with a wide range of psychological symptoms (see review in Ruiz, 2010); (b) to be strongly negatively correlated with general health and quality of life measures (e.g., Westin, Hayes, & Andersson, 2008); (c) to be a mediator between the effects of a wide range of psychological constructs and stressors on psychological symptoms (e.g., between the September 11 terrorist attack and the development of anxiety problems: Farach, Menin, Smith, & Mandelbaum, 2008); (d) to be the process of change of ACT in some studies (see Ruiz, 2010); and (e) to predict performance on experimental challenges (e.g., on a high demanding cognitive task: López et al., 2010). Additionally, psychological inflexibility adds some incremental clinical validity above and beyond existing constructs (Gloster, Klotsche, Chaker, Hummel, & Hoyer, 2011).

The Acceptance and Action Questionnaire (AAQ; Hayes et al., 2004) has been the most widely used measure of experiential avoidance and psychological inflexibility and has proven to be broadly useful because of its noticeable external validity. Indeed, most of the empirical evidence in this topic has been obtained by means of its application. The AAQ has also led to a growing number of versions tailored to particular applied areas (see Bond et al., 2011). However, some problems of the AAQ have been noted regarding its internal consistency and factor structure. Accordingly, the AAQ-II (Bond et al., 2011) has been developed in order to overcome such limitations. This questionnaire is showing better psychometric properties and factor structure than the first AAQ version while maintaining similar levels of external validity.

Since the Spanish translation of the AAQ (Barraca, 2004) has similar limitations to the ones mentioned for the original version, a good number of independent studies conducted in Spain have used a translation of the AAQ-II. The aim of the current study is to analyze the functioning of this translation in six samples from some of the mentioned recent studies. We hypothesized that this Spanish translation would have similar psychometric properties, factor structure and validity data to the original scale.

Method

Participants

Sample 1. It consisted of 51 patients (48% of them were women) with an age range of 20 to 63 years ($M= 35.9$, $SD= 10.9$) suffering from emotional and psychotic disorders. All participants were attending public mental health services from the province of Almería and were being medicated with at least an antipsychotic, an antidepressive or an anxiolytic medication. Participants responded individually to the questionnaires in the presence of one of the experimenters who answered participants' questions. Participants' mean years of schooling were 12.3 ($SD= 2.99$).

Sample 2. Participants in this sample were 253 undergraduate students from Universidad de Almería (62% of them were women) with an age range of 17 to 64 years ($M= 21.9$, $SD= 5.9$). They were studying several careers: psychology, business studies, law, etc. They responded to the questionnaires in their respective classrooms.

Sample 3. This sample was formed by 122 teaching students from Universidad de Almería. The age range was 17 to 46 years ($M= 21.4$, $SD= 4.4$) and 69% of participants were women.

Sample 4. It consisted of 132 participants (63% of women) with an age range of 18 to 69 years ($M= 33.56$, $SD= 12.88$). They were

recruited between students from Universidad de Almería and their relatives. The relative education level of the participants were as follows: 65% having graduated from college or were currently taking university coursework, 20% having graduated from mid-level studies and 15% having completed primary studies.

Sample 5. It consisted of 119 undergraduate students (68% of women) from Universidad de Almería with an age range of 18 to 30 years. They were volunteers in a basic study about transfer of functions. Some experimental phases involved the presentation of electric shocks in their right arm. The intensity of the electric shocks was selected by participants to a point that they experienced as discomforting but not painful.

Sample 6. It was formed by 35 patients (57% of women; $M= 44$ years, $SD= 12.7$) suffering from emotional and/or psychotic disorders attending a public mental health center from the province of Granada. The relative education level of the participants were as follows: 8.6% having graduated from college, 20% having graduated from mid-level studies, 60% having completed primary studies and 11.4% having not completed primary studies. As most of the patients had a low education level, their psychiatrist administered the questionnaires by reading the items aloud and answering the questions that they had about them.

Instruments

Acceptance and Action Questionnaire - II (Bond et al., 2011). The AAQ-II is a general measure of experiential avoidance and psychological inflexibility. It consists of 7 items which are responded to by using a 7-point Likert scale. The items reflect an unwillingness to experience unwanted emotions and thoughts (e.g., "I am afraid of my feelings," "I worry about not being able to control my worries and feelings") and the inability to be in the present moment and behave towards values-directed actions when experiencing psychological events that could undermine them (e.g., "My painful experiences and memories make it difficult for me to live a life that I would value," "My painful memories prevent me from having a fulfilling life," "Worries get in the way of my success"). Recent studies have shown that the AAQ-II has better psychometric properties and a clearer factor structure than the first AAQ version (Bond et al., 2011). It is worth noting that a 10-item version of the AAQ-II with 3 reversed-score items has been widely used in previous studies but, finally, these 3 items have been eliminated from the scale. Accordingly, we present here data related only to the final, 7-item scale. However, as Bond et al. (2011) has noted, the 10-item version is not significantly weaker psychometrically and predictively than the 7-item version; thus it should not be assumed that studies conducted with the 10-item version are invalid. The Spanish translation conducted for the study by Ruiz and Luciano (2009) was used since it showed promising preliminary data (see Table 1). This translation was conducted by the first author and then revised and adjusted by the third author.

Symptoms Checklist-90-R (SCL-90-R; Derogatis, 1994). The SCL-90-R is a 90-item self report instrument designed to assess a wide range of psychological symptoms. Extensive research has supported the reliability and validity of this inventory (e.g., Derogatis & Lazarus, 1994). A global severity index (GSI) can be obtained as a general measure of psychological adjustment. The Spanish adaptation by González de Rivera, de la Cueva, Rodríguez, and Rodríguez (2002), which showed good internal consistency and convergent validity, was used in the current study.

Table 1
Spanish translation of the AAQ-II original items

Debajo encontrará una lista de afirmaciones. Por favor, puntúe en qué grado cada afirmación ES VERDAD PARA USTED. Use la siguiente escala para hacer su elección							
1	2	3	4	5	6	7	
Nunca es verdad	Muy raramente es verdad	Raramente es verdad	A veces es verdad	Frecuentemente es verdad	Casi siempre es verdad	Siempre es verdad	
1. Mis experiencias y recuerdos dolorosos hacen que me sea difícil vivir la vida que quería							
2. Tengo miedo de mis sentimientos							
3. Me preocupa no ser capaz de controlar mis preocupaciones y sentimientos							
4. Mis recuerdos dolorosos me impiden llevar una vida plena							
5. Mis emociones interfieren en cómo me gustaría que fuera mi vida							
6. Parece que la mayoría de la gente lleva su vida mejor que yo							
7. Mis preocupaciones interfieren en el camino de lo que quiero conseguir							

Beck Depression Inventory - Short Form (BDI-SF; Beck, Rial, & Rickels, 1974). The BDI-SF is a 13-item version of the standard 21-item Beck Depression Inventory. The correlation between scores of the short and long forms ranged from .89 to .97, indicating that the short form is a satisfactory substitute for the long form. The Spanish version presented in Bobes-García, García-Portilla, Bascarán-Fernández, Sáiz-Martínez, and Bousño-García (2004) was used.

Short Form of the Metacognitions Questionnaire (MCQ-30; Wells & Cartwright-Hatton, 2004). This short version of the MCQ is a 30-item, 4-point Likert scale (Cartwright-Hatton & Wells, 1997). Like the original MCQ, this questionnaire has five factors: cognitive confidence, positive beliefs about worry, cognitive self-consciousness, negative beliefs about uncontrollability and danger of worry, and beliefs about the need to control thoughts. It has showed good internal consistency and convergent validity and acceptable test-retest reliability. We used the Spanish translation by García-Montes et al., (submitted), which has a good internal consistency (alphas between .75 and .85).

Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990). The PSWQ is a 16-item, 5-point Likert, self-report instrument that was designed for evaluating the permanent and unspecific degree of worry that characterizes *Generalized Anxiety Disorder*. The translated version by Sandín, Chorot, Valiente and Lostao (2009) was administered. Its internal consistency is high, within an alpha range between .93 and .95, and it shows good discriminant validity.

Anxiety Sensitivity Index (ASI; Peterson & Reiss, 1992). The ASI is a 16-item, 5-point Likert scale that aims to measure the fear of experiencing anxiety symptoms. Anxiety sensitivity is a central aspect of the anxiety expectancy theory and was proposed as a predisponent factor for developing anxiety disorders. The Spanish adaptation of the ASI has good psychometric properties in clinical and normal populations, an adequate factor structure and convergent and discriminant validity (e. g., Sandín, Chorot, & McNally, 2001).

Kentucky Inventory of Mindfulness Skills - Reduced (KIMS-R; Baer, Gregory, & Allen, 2004). The KIMS was designed to measure four mindfulness skills: observe, describe, act with awareness and

accept without judgment. The authors found that these skills were differentially related to several aspects of personality, mental health, psychological symptoms and experiential avoidance. The original inventory has a good internal consistency and factor structure. However, a shorter, 21-item Spanish adaptation conducted by the first author was used in this study. Each item is responded to by using a 5-point Likert scale. Preliminary data shows that this adaptation has good internal consistency (alphas between .77 and .88) and a clear factor structure.

Coping Strategies Inventory (CSI; Tobin, Holroyd, & Reynolds, 1984). The CSI is a 40-item, 5-point Likert inventory with a hierarchical factor structure involving 8 coping styles that are contained in four secondary scales (adequate and inadequate coping focused on both problems and emotions). The Spanish adaptation by Cano, Rodríguez, and García (2007) was administered. It has a good internal consistency and convergent validity.

General Self-Efficacy Scale (GSC; Baessler & Schwarzer, 1996). The GSC is a 10-item, 4-point Likert scale that aims to measure the people's belief about their ability to handle a wide range of stressors. It has showed a good internal consistency, with alphas between .79 and .93, and to be a good predictor of the coping style focused on the task or on the emotion (Sanjuán, Pérez, & Bermúdez, 2000).

Short-Form Health Survey (SF-36; Ware & Sherbourne, 1992). It is a 36-item measure of health status that has been widely used in health research and is an accepted standard for a brief, generic, multidimensional measure of health-related functioning. It contains eight health concepts that belong to two general indexes: the mental and the physical health indexes.

The AAQ-II was administered to all samples while the SCL-90-R was applied to Samples 1 and 2, the BDI-SF and MCQ to sample 3, the PWSQ, ASI, GSC, KIMS-R and CSI to sample 4, and the SF-36 to sample 6.

Data analysis

First, to explore the internal consistency of the scale, the Pearson product-moment correlations between each item and

the total score and the Cronbach's alpha were computed for each sample and for the whole pool of data. Second, the Kaiser-Meyer-Olkin index and the Barlett esfericity tests were computed for each and the overall sample to analyze if they were apt for conducting factor analyses. Subsequently, exploratory factor analyses by principal component analysis were conducted with every and the overall sample. Third, mean scores from clinical and nonclinical samples were compared using Student's t-test. Finally, to explore the validity of the AAQ-II, its Pearson correlations with the other scales were computed.

Results

Item analysis of the AAQ-II

Table 2 shows the correlations between each item and the total scale score that were in an overall range of .58 (item 6) to .75 (item 4). The overall Cronbach's alpha of the scale was .88 (from .75 for sample 1 to .93 for sample 6).

Factor structure

All samples were apt for conducting a factor analysis according to the Kaiser-Meyer-Olkin index (for samples 1 to 6, respectively, .75, .85, .73, .84, .78, and .82) and the Barlett esfericity test (X^2 for samples 1 to 6, respectively, 91.04, 732.46, 379.73, 390.39, 202.44). Figure 1 shows the scree plots resulting from the exploratory factor analyses conducted with every sample. A main factor was found in all samples although samples 1 and 3 showed a second small factor according to the Kaiser criterion. An additional factor analysis was conducted with the whole pool of samples (the Kaiser-Meyer-Olkin index was .87 and the Bartlett esfericity test was significant: $X^2= 2312.05$; $p<.0001$). This analysis led to a clear one-factor solution (see Figure 2). This factor explained 57.33% of the variance in items scores while the second and third factors explained, respectively, 10.88% and 9.11%. Table 3 shows that the items' saturations with the main factor varied from .69 to .84.

Normative data

Table 4 shows the mean scores obtained in each sample. Scores in clinical samples (1 and 6) were statistically significantly higher

(overall $M= 32.64$, $SD= 9.12$) than in the nonclinical samples (overall $M= 21.22$, $SD= 7.76$; $t= 12.69$, $p<.0001$). The mean women's scores were statistically significantly higher than the mean men's scores in three samples (sample 1: $U= 218$, $p= .028$; sample 2: $t= -3.57$, $p<.001$; sample 4: $t= -2.33$, $p= .022$).

Validity data

Table 5 shows the correlations between the scores in the AAQ-II and the other instruments. The AAQ-II scores were significantly correlated with all the psychological symptoms evaluated by the SCL-90-R and with the GSI (from .55 in sample 2 to .58 in sample 1). In sample 3, the AAQ-II scores significantly correlated with the BDI scores ($r= .45$) and with the following subscales of the MCQ: negative beliefs about the uncontrollability of thoughts ($r= .46$), need to control thoughts ($r= .42$), positive beliefs about worry ($r= .32$) and self-consciousness ($r= .18$). In sample 3, the AAQ-II scores were strongly correlated with the degree of worries ($r= .56$), anxiety sensitivity index ($r= .43$), general self-efficacy ($r= -.40$), adequate coping with problems ($r= -.46$), and inadequate coping with emotions ($r= .26$). Also, the AAQ-II scores were correlated with the accept without judgment and act with awareness subscales of the KIMS (respectively, $r= -.49$ and $r= -.31$). The AAQ-II scores were also significantly correlated with the level of shock selected as discomforting by participants in sample 5 ($r= -.28$). Finally, the AAQ-II scores in sample 6 correlated with the mental health index ($r= -.58$) and the physical health index ($r= -.44$) of the SF-36.

Table 2
Correlations between each item and the total score. Clinical samples are signaled with asterisks

Sample	1*	2	3	4	5	6*	Overall
Item 1	.61	.69	.55	.64	.60	.87	.71
Item 2	.34	.59	.42	.62	.55	.76	.60
Item 3	.51	.65	.53	.59	.63	.73	.67
Item 4	.68	.71	.72	.73	.61	.88	.75
Item 5	.47	.54	.49	.60	.45	.84	.59
Item 6	.21	.64	.50	.44	.44	.60	.58
Item 7	.51	.60	.57	.73	.52	.75	.68
Alpha	.75	.86	.80	.86	.86	.93	.88

Table 3
Factor saturation of each item with the main factor

	Main factor
Item 1	.81
Item 2	.71
Item 3	.77
Item 4	.84
Item 5	.70
Item 6	.69
Item 7	.77

Table 4
Summary of the demographical variables and mean scores in all samples

Sample	1	2	3	4	5	6
N	51	256	123	132	119	35
Age mean	35.3 (10.8)	21.9 (6.0)	21.4 (4.4)	33.6 (12.9)	20.3 (2.1)	44 (12.8)
% female	74%	62%	69%	63%	68%	57%
Clinical?	YES	NO	NO	NO	NO	YES
M score	33.5 (8.1)	20.9 (7.9)	22.6 (7.5)	21.0 (8.0)	21.0 (7.5)	31.5 (10.6)
M (women)	36.2 (6.2)	22.3 (8.5)	21.8 (6.3)	21.7 (8.2)	21.6 (7.6)	32.3 (11.1)
M (men)	31 (8.9)	18.5 (6.3)	24.2 (9.4)	18.1 (6.5)	19.6 (7.0)	30.5 (10.1)

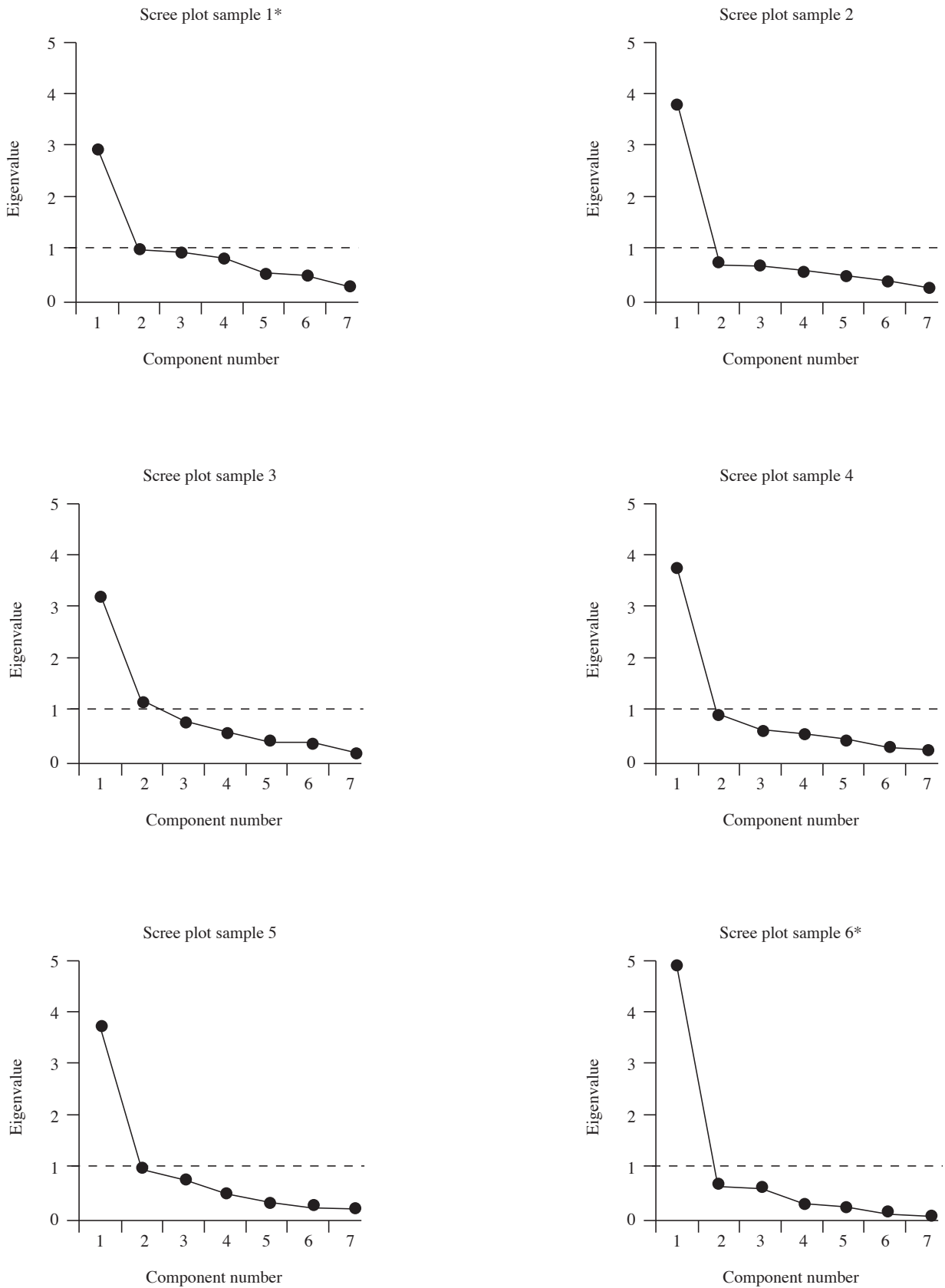


Figure 1. Scree Plots resulting from the factor analysis conducted with Samples 1 to 6 (asterisk= clinical sample). The horizontal dashed lines represent the Kaiser criterion

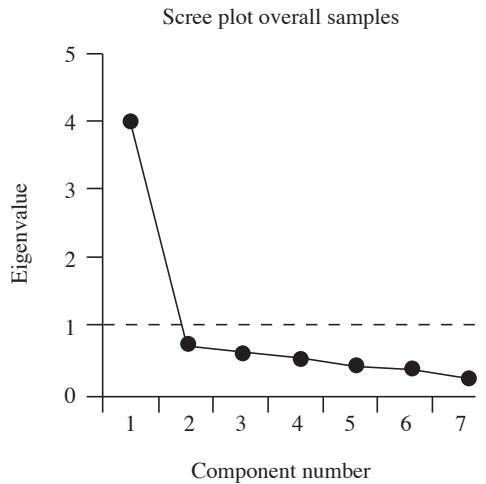


Figure 2. Scree Plot resulting from the factor analysis with the overall data. The horizontal dashed line represents the Kaiser criterion

Discussion

The data obtained showed that this Spanish version of the AAQ-II has good: (a) internal consistency (overall alpha= .88), (b) construct validity (i.e., the factor analysis led to a one-factor solution), (c) discriminant validity (i.e., the AAQ-II scores discriminated between clinical and nonclinical samples), and (d) external validity in view of the strong correlations founded with a wide range of psychological symptoms, quality of life and other psychological constructs. The current data are very similar to the ones obtained by Bond et al., (2011).

With respect to the internal consistency data, we found a large difference between the two clinical samples (samples 1 and 6). This might be due to the differences in their respective procedures. For instance, participants in sample 1 responded to the questionnaires alone while participants in sample 6 were read the items, which may have caused patients to respond more truthfully since a possible misunderstanding of the items was minimized. Specifically, participants in sample 1 seem to have a harder time than participants in sample 6 in understanding items 2 and 6, which showed correlations with the total-score lower than .50.

Some limitations of this study are worth noting. First, the rate of women was significantly higher than the rate of men in most of the samples. Second, some of the scales used for analyzing the concurrent validity lacked of formal validation (i.e., KIMS-R, MCQ-30). Third, no information was obtained concerning the course of therapy in the clinical samples. Finally, because the current study is a compilation of six samples from independent studies, no methodological rationale guided the selection of the samples and the measures used to analyze the validity of the AAQ-II. Although this is a clear limitation, it can also be seen as a virtue

Table 5

Relationships between the AAQ-II scores and psychological symptoms, quality of life and other constructs. Clinical samples are signaled with asterisks

Measure	S	N	r with AAQ-II
SCL-90-R GSI	1*	51	.58*
	2	253	.55*
Somatization	1*	51	.34**
	2	253	.36*
Obsessive-compulsive	1*	51	.45*
	2	253	.51*
Interpersonal sensitivity	1*	51	.51*
	2	253	.53*
Depression	1*	51	.57*
	2	253	.56*
Anxiety	1*	51	.55*
	2	253	.43*
Hostility	1*	51	.47*
	2	253	.43*
Phobic anxiety	1*	51	.29**
	2	253	.39*
Paranoid ideation	1*	51	.45*
	2	253	.49*
Psychoticism	1*	51	.52*
	2	253	.50*
BDI - SF	3	122	.45*
MCQ - Cog. confidence	3	122	.18
MCQ - Positive beliefs	3	122	.33*
MCQ - Self-consciousness	3	122	.18**
MCQ - Uncontrollability	3	122	.46*
MCQ - Need to control thoughts	3	122	.42*
PSWQ (worry)	4	132	.56*
ASI (anxiety sensitivity)	4	132	.43*
GSC (self-efficacy)	4	132	-.40*
KIMS - observe	4	132	-.01
KIMS - describe	4	132	-.12
KIMS - act with awareness	4	132	-.31*
KIMS - acceptance	4	132	-.49*
CSI - adequate coping problems	4	132	-.46*
CSI - adequate coping emotions	4	132	-.11
CSI - inadequate coping problems	4	132	.08
CSI - inadequate coping emotions	4	132	.26**
Selected shock level	5	119	-.28**
SF-36 - Mental health	6*	35	-.58*
SF-36 - Physical health	6*	35	-.44**

because this translation of the AAQ-II has showed good properties in different contexts.

In conclusion, this Spanish translation of the AAQ-II emerges as a reliable and valid measure of general experiential avoidance and psychological inflexibility, which have showed to be important constructs for understanding psychopathology and quality of life.

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