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Avoidance and Activation as Keys to Depression: Adaptation of the Behavioral Activation for Depression Scale in a Spanish Sample

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In this paper we present the adaptation of the Behavioral Activation for Depression Scale (BADS), developed by Kanter, Mulick, Busch, Berlin, and Martell (2007), in a Spanish sample. The psychometric properties were tested in a sample of 263 participants (124 clinical and 139 non-clinical). The results show that, just as in the original English version, the Spanish BADS is a valid and internally consistent scale. Construct validity was examined by correlation with the BDI-II, AAQ, ATQ, MCQ-30, STAI and EROS. Factor analysis justified the four-dimensions of the original instrument (Activation, Avoidance/Rumination, Work/School Impairment and Social Impairment), although with some differences in the factor loadings of the items. Further considerations about the usefulness of the BADS in the clinical treatment of depressed patients are also suggested.

Keywords: behavioral activation, depression, psychotherapy, test validation, Spain.

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Correspondence concerning this article should be addressed to Jorge Barraca Mairal. Dpto. de Psicología. Facultad de Ciencias de la Salud. Universidad Camilo José Cela. C/. Castillo de Alarcón, 49. Urb. Villafranca del Castillo. 28692 Madrid (Spain). E-mail: jbarraca@ucjc.edu
Behavioral activation (BA) is a functional analytic therapy deeply rooted on Skinner’s applied behavior analysis (Skinner, 1953). BA therapy is also based on previous behavioral approaches to depression as Fester’s functional analysis (Fester, 1973) and Lewinsohn’s model of depression, the latter essentially focused on pleasant events scheduling to increase rates of response-contingent positive reinforcement (Zeiss, Lewinsohn, & Muñoz, 1979). Therapies based on behavioral activation have recently appeared as some of the most efficacious and efficient treatments for depression (Cuijpers, van Straten, & Warmerdam, 2007; Cullen, Spates, Pagoto, & Doran, 2006; Daughters et al., 2008; Dimidjian et al., 2006; Dodson et al., 2008; Hopko, Lejuez, LePage, Hopko, & McNeil, 2003; Porter, Spates, & Smithan, 2004). The current intervention of Behavioral Activation (Jacobson, Martell, & Dimidjian, 2001; Martell, Addis, & Jacobson, 2001) is a therapy expressly directed at helping the person to increase activation in such a way that he can experience greater contact with the sources of reward and solve the problems in his/her life.

Currently there are two different versions of BA, one by Martell et al. (2001) and one by Lejuez, Hopko, & Hopko (2001), the last one referred to as behavioral activation treatment of depression (BATD). Both target activation but have slightly different techniques (see Barraca, 2009, and Hopko, Lejuez, Ruggiero, & Eifert, 2003 for a more extended discussion).

The therapy focuses on activating clients to contact positive reinforcement. This is done by assigning activities, identifying and blocking avoidance behaviors that might interfere with activation, and a variety of other strategies (Kanter et al., 2010). The procedure consists of studying the case according to a functional behavior analysis. BA is a structured therapy with one clear target: promoting activation, frequently by reducing the avoidance patterns (Martell et al., 2001).

Therefore, the evaluation of avoidance and activation is of key importance within this model. This requires an instrument of proven reliability and validated in clinical populations, which not only determines these two dimensions of the depressive situation, but serves as a guide and measures the course of the therapy. In this respect, the Behavioral Activation for Depression Scale (BADS) (Kanter, Mulick, Busch, Berlin, & Martell, 2007) is an instrument aimed to measure changes in avoidance and activation over the course of the BA therapy.

The first version of the BADS was composed of 55 items and tested on a non-clinical undergraduate sample of 391 participants. After an exploratory factor analysis, the number of items was reduced to 33 according to the factor loadings, and then again to 29 because of the heterogeneity of the content of 4 items in a factor that was finally omitted. The psychometric properties of this 29-item scale (called Behavioral Activation for Depression Scale: BADS) were promising, with a Cronbach’s Alpha of the total score = .79, significant correlations with the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), the Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988) and the activity subscale of the Interpersonal Events Schedule (IES; Youngren & Lewinsohn, 1980).

In a second study with 319 undergraduate psychology students the 29-item scale was subjected to confirmatory factor analysis to replicate the original factor structure and determine the goodness of fit based on a variety of indices. Study 2 also examined test-retest reliability and made several construct validity predictions with the other instruments administered along with the BADS. Confirmatory factor analysis supported the original factor structure, but suggested the reduction of 4 items. Internal consistency of this final 25-item BADS was high (α = .87) as well as test-retest reliability (rxy = .74). Significant correlations were found in the expected directions with the BDI (Beck et al., 1961), the Automatic Though Questionnaire (ATQ; Hollon & Kendall, 1980), the Acceptance and Action Questionnaire (AAQ; Hayes et al., 2004), the Cognitive Behavioral Avoidance Scale (CBAS; Ottenbreit & Dobson, 2004), and the Rumination Subscale of the Response Stiles Questionnaire (RSQ-RUM; Nolen-Hoeksema & Morrow, 1991) (see details in Kanter et al., 2007). Although these studies have a number of limitations, they provide support for the internal consistency, predictive and construct validity of the original scale in non-clinical samples.

In a more recent study, Kanter, Rusch, Busch, and Sedivy (2009) have presented new results on the good psychometric properties of the BADS with a community sample with elevated depressive symptoms (N = 193). Additional evidence for construct validity of the total scale and subscales was demonstrated with the predicted relationships between the BADS and measures of avoidance (CBAS), social support (SSQ) and depression (CES-D). Also, through confirmatory factor analysis, they again show the adequate fit of the data to the original factor structure.

As the authors say, “replication of these results with different samples, particularly clinical and more ethnically diverse samples, is necessary” (Kanter et al., 2007, p. 200). Previous research has successfully demonstrated the cross-cultural generalizability of the BADS to a non-English population (i.e., Dutch) (Raes, Hoes, Van Gucht, Kanter, & Hermans, 2010). This study tries to extend this effort by presenting the data of the Spanish adaptation. Since the factor structure of the BADS has previously demonstrated a good fit to the data from samples combining clinical and non-clinical subjects (Raes et al., 2010), the Spanish adaptation has also been implemented to a heterogeneous sample in order to compare the scores of different groups in terms of diagnostic status. The present study is therefore the first to report normative data including disorders other than depression. In this sense, we expect the BADS to discriminate properly depressive symptoms from other diagnoses.
Although there are no papers at the moment showing the efficacy of BA therapy with the Spanish population, we consider this adaptation may be valuable in view of the efficacy that BA therapy has demonstrated so far (Cuijpers et al., 2007; Cullen et al., 2006; Daughters et al., 2008; Dimidjian et al., 2006; Dodson et al., 2008; Hopko et al., 2003; Porter et al., 2004). In this sense, we hope that the widespread use of instruments like the BADS will encourage further works.

Method

Participants and Procedure

The sample consisted of 263 participants from different places in Spain. Non-clinical participants (52.9%) were recruited from the Universidad de Oviedo and Universidad Camilo José Cela in Madrid, and were composed of both students and university staff. The clinical participants (47.1%) were subjects under treatment for a psychological disorder, the majority having been diagnosed with Major Depressive Disorder (MDD) (50.9%). Most of the participants came from private clinical settings (71%) and the others from public clinical services (29%). All these subjects sought clinical counseling services voluntarily.

The mean age of the non-clinical sample was 24.05 (SD = 7.32). 107 (77%) were female. 125 (89%) were single, 12 (8%) were married, 1 (0.7%) were divorced/separated. (Some subjects did not provide this information). 60.4% of the participants had college studies. In the clinical sample mean age was 38.5 (SD = 11.01). 80 (64.5%) were female. 51 (41.1%) were single, 45 (36.3%) were married, 18 (14.5%) were divorced/separated, and 3 (2.4%) were widowed. (Some subjects did not provide this information). 50% of these participants had college studies.

The questionnaires were applied in clinical (counseling services) and non-clinical (university) settings. In the university setting participants were students, professors and administrative employees. Questionnaires were distributed differently in the two settings. The clinical sample was given by therapists who explained the BADS and the other instruments directly to their patients after obtaining their informed consent to the research (therapists also provided the diagnosis). The authors distributed them to the non-clinical participants and provided them with the necessary instructions.

BADS Item Forward-Backward Adaptation

As recommended (Hambleton & Kanjee, 1995), we used two groups of bilingual translators working independently in a Forward-Backward Adaptation design. Before translating the items of a questionnaire into another language to be used in a country with its own culture, the conceptual equivalence and content equivalence of the underlying construct should be considered. Conceptual equivalence refers to having similar meanings in different cultures (Flaherty et al., 1988). Two researchers, experts in the field, agreed that the meaning of the behavioral activation and avoidance patterns underlying the BADS scale was meaningful in the Spanish culture.

Content equivalence is established by showing that the content of each item is relevant to the culture being considered and likely to have similar meanings in both cultural contexts. In our case, two bilingual researchers, who were fluent in both English and Spanish and were involved in the back-translation process, evaluated the content equivalence of each item. All 25 items of the existing English-language BADS were thought to be relevant to behavioral activation and avoidance patterns amongst the Spanish population. In order to increase linguistic equivalence between the existing English-language BADS and the new Spanish language BADS, a forward-backward translation method was used. Each English item was translated into Spanish by a bilingual translator familiar with the field. A bilingual linguist familiar with both societies then translated the proposed Spanish-language items back into English. The two translations were compared, discussed, reduced to a single mutually agreeable wording and carefully examined by us to determine whether the items seemed to be essentially the same as the English-language originals.

Once the item wording had been decided, the items were placed in a questionnaire format in which participants were asked to rate each one on a 0-to-6 Likert-type response scale ranging from 0 (not at all [en absoluto]) to 6 (completely [completamente cierto]), as on the English original scale. The items appeared in the same order and with the same balanced responses as the original 25-item scale (see Appendix for the Spanish version).

Instruments

We could not select the same instruments used by Kanter et al. (2007), because not all of them are adapted to the Spanish population. However, we did try to choose those most closely related. All the subjects in the sample completed the following questionnaires:

Behavioral Activation for Depression Scale: The BADS (Kanter et al., 2007) consists of 25 items and measures four dimensions: Activation, Avoidance/Rumination, Work/School Impairment, and Social Impairment. The version used here was adapted by J. Barraca at Universidad Camilo José Cela (Madrid, Spain) and M. Pérez-Álvarez at the Universidad de Oviedo (Oviedo, Spain). Subscale scores were computed as the unweighted sums of the items comprising each subscale. Items on all the scales other than Activation were reverse-coded and then an unweighted sum was computed for the total scale score.

Beck Depression Inventory-II: The BDI-II (Beck, Steer, & Brown, 1996) is a 21-item self-report rating inventory
measuring characteristic attitudes and symptoms of depression. Each item has four sentences (scored from 0 to 3), referring to how the participant has felt over the last week. The total score may range from 0 to 63. A higher score indicates a higher level of depressive symptoms. In the Spanish adaptation (Sanz, García-Vera, Espinosa, Fortún, & Vázquez, 2003; Sanz, Navarro, & Vázquez, 2003; Sanz, Perdigón, & Vázquez, 2003) the internal consistency for clinical samples (α = .89), undergraduate students (α = .89) and general population (α = .87) was high.

Acceptance and Action Questionnaire: The AAQ (Hayes et al., 2004) consists of nine statements, and measures experiential avoidance as conceptualized by Acceptance and Commitment Therapy (Hayes, Strosahl, & Wilson, 1999). The items are evaluated on a 7-point Likert scale. The total score may range from 9 to 63. A higher score indicates a higher level of avoidance. Here we used the Spanish adapted version (Barraca, 2004) which showed acceptable reliability (α = .74), temporal stability (rxx = .71), and significant correlations with BDI, STAI and other (Spanish) measures of obsessive-compulsive and borderline personality disorders.

Automatic Thought Questionnaire: The ATQ (Hollon & Kendall, 1980) is a 30-item self-report inventory developed to measure the frequency of occurrence of automatic negative thoughts (negative self-statements) associated with depression. The Spanish adaptation of the ATQ (Cano-García & Rodríguez-Franco, 2002) indicates a four-dimension structure (Negative Self-Concept, Hopelessness, Maladjustment and Self-Reprioch). Cronbach’s alpha for the four dimensions are = .94, .93, .87 and .85.

Short form of the Metacognitions Questionnaire: The MCQ-30 (Wells & Cartwright-Hatton, 2004) measures individual differences in a selection of metacognitive beliefs, judgments and monitoring tendencies considered important in the metacognitive model of psychological disorders. The MCQ-30 is consistent with a five-factor structure, which was almost identical to the original solution found in previous studies with the full MCQ. The five factors are: cognitive confidence, positive beliefs about worry, cognitive self-consciousness, negative beliefs about the uncontrollability of thoughts and danger, and beliefs about the need to control thoughts. The Spanish MCQ used here was the version adapted by García-Montes, Pérez-Álvarez, Soto, Perona, and Cangas (2006). In that study the internal consistency (α) coefficients for the five subscales of the questionnaire were .92, .88, .86, .81, and .73.

State-Trait Anxiety Inventory: The STAI (Spielberger, Gorsuch, & Lushene, 1982) the internal consistency (KR-20) is .90 for the State subscale; and .84 for the Trait subscale.

Environmental Reward Observation Scale: The EROS (Armento & Hopko, 2007) is an instrument with 10 items developed as an efficient, reliable, and valid self-report measure of environmental reward. The items measure increased behavior and positive affect as a consequence of rewarding environmental experiences. Items on the EROS are answered using a 4-point Likert scale, ranging from 1 (strongly disagree) to 4 (strongly agree), with the total score representing a sum of the 10 items. Exploratory factor analysis confirmed the one-dimensionality of EROS. The scale has strong internal consistency (α = .85) and good test-retest reliability (rxx = .85). Some data supported the construct validity of the EROS (significant correlations with Pleasant Events Schedule and BDI). The Spanish version (Barraca & Pérez-Álvarez, 2010) has also a good internal consistency (α = .86) and the same factor structure of the original instrument.

Results

Reliability

Internal consistency. The internal consistency of the BADS total scale and subscale scores were assessed using Cronbach’s alpha. The total score demonstrated a good internal consistency (α = .90). The internal consistency for each subscale was also acceptable: Activation (7 items; α = .81), Avoidance/Rumination (8 items; α = .82), Work/School Impairment (5 items; α = .76), and Social Impairment (5 items; α = .88). These results are in line with those found by Kanter’s team in the original 25-item instrument (see Table 1 for comparison).

Corrected item-subscale correlations were obtained for each scale. For Activation, values ranged from .48 to .57; for Avoidance, values ranged from .50 to .61(except for item 10, which correlated .42); for Work/School Impairment, values ranged from .52 to .63 (except for item 6, which correlated .27); and for Social Impairment, values ranged from .76 to .81. The Spanish adaptation version (n = 263) and in the original English version (n = 319).

<table>
<thead>
<tr>
<th></th>
<th>Spanish Adaptation</th>
<th>English Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activation</td>
<td>.81</td>
<td>.85</td>
</tr>
<tr>
<td>Avoidance/Rumination</td>
<td>.82</td>
<td>.86</td>
</tr>
<tr>
<td>Work/School Impairment</td>
<td>.76</td>
<td>.76</td>
</tr>
<tr>
<td>Social Impairment</td>
<td>.88</td>
<td>.82</td>
</tr>
<tr>
<td>BADS Total</td>
<td>.90</td>
<td>.87</td>
</tr>
</tbody>
</table>
.79 (except for item 16, which correlated .54). All items contributed to increase the Cronbach’s Alfa coefficient corresponding to its subscale with the exception of items 6 and 16. Cronbach’s Alpha for the Work/School Impairment subscale after removing item 6 was .78, and for the Social Impairment subscale after removing item 16 was .90.

Table 2 presents the correlations between subscales, and the subscale-total correlations after removing each subscale from the total scale. Correlations for the four subscales were found to be significant at the .001 level.

<table>
<thead>
<tr>
<th></th>
<th>Activation</th>
<th>Avoidance/Rumination</th>
<th>Work/School Impairment</th>
<th>Social Impairment</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activation</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoidance/Rumination</td>
<td>-.21*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work/School Impairment</td>
<td>-.45**</td>
<td>.51**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Impairment</td>
<td>-.35**</td>
<td>.58**</td>
<td>.49**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>BADS Total</td>
<td>.38**</td>
<td>-.55**</td>
<td>-.63**</td>
<td>-.63**</td>
<td>1</td>
</tr>
</tbody>
</table>

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

Validity

Construct Validity: In order to replicate the original factor structure found by Kanter et al., (2007) and Kanter et al., (2009) a Confirmatory Factor Analysis (CFA) was conducted. No item showed substantial departure from normal distribution (skewness: $M = -.325$, $SD = .381$, $Min = -1.130$, $Max = .405$; kurtosis: $M = -.856$, $SD = .399$, $Min = -1.361$, $Max = .236$), with all skewness and kurtosis values < 2 (West, Finch, & Curran, 1995). However, the normalized Mardia’s coefficient (Mardia, 1970, 1974) showed a value of 28.719, clearly above the cutoff point of 5.00 suggested by Bentler (2005). Therefore, a robust maximum likelihood method of estimation was employed in order to account with the significant multivariate kurtosis of the data. This robust ML method provides the Satorra-Bentler Scaled $\chi^2$ statistic which corrects the usual ML $\chi^2$ value, as well as the standard errors (Satorra & Bentler, 1988, 1994).

To determine the goodness of fit of the model additional fit indices were computed: the Comparative Fit Index (CFI; Bentler, 1990), the Tucker-Lewis Index (TLI; Tucker & Lewis, 1973), the Root Mean Square Error of Approximation (RMSEA; Steiger & Lind, 1980), and the Standardized Root Mean Squared Residual (SRMR). Evidence for model fit differed by index (S-B $\chi^2(269) = 615.498$, $p < .001$; CFI = .850; TLI = .833; SRMR = .078; RMSEA = .070). CFI and TLI values less than .90 represent a mediocre model fit (Bollen, 1989; Hoyle, 1995), whereas RMSEA value less than .08 and SRMR value less than .10 demonstrate an acceptable and a good model fit, respectively (Browne & Cudeck, 1993; Hu & Bentler, 1999; Kline, 2005). Nonetheless, it is important to note that CFI and TLI values depend on sample size (Raykov & Widaman, 1995).

All parameter estimates (factor loads and covariances) were statistically significant at the .001 level. Figure 1 presents the completely standardized factor solution of the CFA. As can be observed, items 6 and 10 show a relatively poor performance, presenting standardized factor loadings below .40 (item 6: $\beta = .33$; item 10: $\beta = .39$) and squared multiple correlations below .20 (item 6: $R^2 = .11$; item 10:

Figure 1. Completely standardized CFA factor solution.
Results regarding item 6 are consistent with those reported by Kanter, et al., (2009). Criterion-Related Validity. In trying to replicate the correlations found by Kanter et al., (2007) we observed high and significant correlations in the expected directions with measures of Depression (BDI-II), Experiential Avoidance (AAQ), Automatic Thoughts (ATQ), Metacognitive Beliefs (MCQ-30), Anxiety (STAI), and Environmental Reward (EROS). Our findings point in the same direction reported by Kanter et al., (2007). However, in our sample, correlations were slightly higher. Table 3 summarizes these results. The higher the BDI-II, AAQ, ATQ, MCQ-30 and STAI scores, the less Activation and BADS total scores, and the more Avoidance/Rumination, Work/School Impairment and Social Impairment scores. Regarding environmental reward, as the EROS scores increase, Activation and BADS total scores increase, and Avoidance/Rumination, Work/School Impairment and Social Impairment scores decrease. As expected, the AAQ measure of experiential avoidance correlated the most with the Avoidance/Rumination subscale ($r_{xy} = .49; p < .001$), whereas the Eros measure of environmental reward correlated the most with the Social Impairment subscale ($r_{xy} = -.59; p < .001$). The AAQ (automatic thoughts) also correlated high with the Avoidance/Rumination subscale ($r_{xy} = .60; p < .001$), as well as the MCQ-30 ($r_{xy} = .50; p < .001$); particularly the fourth and fifth subscales of the MSC-30: negative beliefs about the uncontrollability of thoughts and danger ($r_{xy} = .52; p < .001$), and beliefs about the need to control thoughts ($r_{xy} = .42; p < .001$). Depression (measured with the BDI by Kanter et al., and with BDI-II in the present study) was more highly correlated to the BADS in the American ($r_{xy} = -.67$) as well as in the Spanish sample ($r_{xy} = -.73$). When the correlations with depression scores were repeated while controlling for anxiety scores (STAI-S), all correlations between BADS subscales and depression scores remained significant. However, when the correlations with anxiety were repeated with depressive scores partialed, only correlations between Avoidance/Rumination subscale remained significant.

Discriminant Validity. Data for discriminant validity were found by means of two types of statistical analyses. Student’s t tests comparing the clinical and non-clinical subjects, and a multivariate analysis of variance (MANOVA) comparing the various diagnoses in our sample: MDD, Anxiety, and Others (personality disorders, pathological gambling, psychoses, etc.). Regarding the Student’s t tests, the clinical ($n = 124$) and non-clinical ($n = 139$) groups showed significant differences in the BADS total score, $t(261) = 6.36; p < .001; d = .78$. That is, there is reason to believe in the ability of the BADS to discriminate between a general sample and a clinical therapy group. Specifically, there were found significant differences in the Avoidance/Rumination subscale.
Table 5
Means and standard deviations of the BADS total scale and subscales for the Non-clinical, Depressive, Anxious and Other diagnostics groups.

<table>
<thead>
<tr>
<th></th>
<th>Non-clinic (n = 139)</th>
<th>MD (n = 63)</th>
<th>Anxious (n = 14)</th>
<th>Other (n = 24)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Activation</td>
<td>23.61</td>
<td>7.67</td>
<td>21.15</td>
<td>8.13</td>
</tr>
<tr>
<td>Avoidance/Rumin</td>
<td>18.70</td>
<td>10.31</td>
<td>26.07</td>
<td>8.91</td>
</tr>
<tr>
<td>Work/School Imp</td>
<td>12.43</td>
<td>6.44</td>
<td>14.87</td>
<td>7.01</td>
</tr>
<tr>
<td>Social Impairm.</td>
<td>4.95</td>
<td>5.97</td>
<td>12.56</td>
<td>8.10</td>
</tr>
<tr>
<td>BADS Total</td>
<td>95.51</td>
<td>23.03</td>
<td>75.64</td>
<td>22.82</td>
</tr>
</tbody>
</table>

Table 4 shows means, standard deviations and mean standard error for both groups.

A one way MANOVA was performed in order to analyze multivariate differences in the set of subscales and total scale between the four groups in the sample: 1. Non-clinical subjects (n = 139); 2. MDD patients (n = 63); 3. Anxiety patients (n = 14); and 4. Patients with other diagnoses (n = 24). Results revealed a group main effect, \( \lambda = .76; F(12, 619.40) = 5.70; p < .001; \eta^2 = .09 \). Univariate tests also yielded significant main effects for Avoidance/Rumination, \( F(3, 237) = 10.33; p < .001; \eta^2 = .12 \), Social Impairment, \( F(3, 237) = 20.88; p < .001; \eta^2 = .21 \), and BadS total, \( F(3, 237) = 11.32; p < .001; \eta^2 = .12 \), but not for Activation, \( F(3, 237) = 1.55; p = .20; \eta^2 = .02 \), and Work/School Impairment, \( F(3, 237) = 1.86; p = .14; \eta^2 = .02 \). Bonferroni-corrected multiple comparisons revealed significant differences in Avoidance/Rumination scores between the Non-clinical group and both the Depressive (\( M_{ij} = – 7.37; SE = 1.51; p < .001 \)) and the Anxious (\( M_{ij} = – 8.95; SE = 2.70; p < .01 \)) groups; in Social Impairment scores between the Non-clinical group and the Depressive group (\( M_{ij} = – 7.60; SE = 1.05; p < .001 \)), the Anxious group (\( M_{ij} = – 6.62; SE = 1.88; p < .01 \)), and the Other diagnostics group (\( M_{ij} = – 6.00; SE = 1.53; p < .001 \)); and in BADS total only between the Non-clinical and the Depressive groups (\( M_{ij} = 19.87; SE = 3.59; p < .001 \)) (see Table 5 and Figure 2).

Spanish normative data

We offer clinicians and researchers who wish to use the scale on a Spanish population the means and standard deviations from our sample (see Table 6). Statistically significant gender differences were observed only for the Social Impairment subscale, \( t(261) = 2.12; p < .05; d = .29 \).

BADS scores, as recommended in the original instrument, were found by reverse-coding items from all scales except Activation and then all the items were added up. No items were reverse-coded for scoring the subscales. This process allowed high scores on the total scale and the subscales to...
be represented by the scale and subscale names. Coherent with the original factor structure, Items 3, 4, ... 12 correspond to the Activation subscale; Items 8, 9, 10, 13, 14, 15, 24, and 25 to the Avoidance/Rumination subscale; Items 1, 2, 6, 21, and 22 to the Work/School Impairment subscale; and Items 16, 17, 18, 19, and 20, to the Social Impairment subscale.

Discussion

The purpose of this paper was to present the Spanish adaptation of the BADS, an instrument originally developed by Kanter et al. (2007) to assess activation and avoidance response patterns in an array of situations and contexts (e.g., academic, social, work, etc.). We believe that the thorough process of foreign language adaptation and the characteristics of the participants used here ensured quality statistical outcomes. Taken as a whole, our BADS met psychometric standards for reliability, and showed evidence of validity criteria. All subscales demonstrated high internal consistency as well as acceptable item-subscale correlations. Our results also provide additional evidence for the factorial validity of the BADS in a Spanish sample. Although the fit to the data differs depending on the index, the proposed model shows an acceptable fit, replicating the original four-factor structure found by Kanter et al. (2007). Therefore, our data support the assumption that the factor structure of the BADS generalizes to Spanish population. Nonetheless, some fit indices may have been affected by sample size. Future research using larger samples may lead to an increase in model fit and allow testing the BADS factor structure in both clinical and non-clinical samples, separately. Consistent with earlier reports (Kanter et al., 2009), item 6 performed poorly, with a standardized factor loading of .33 and a squared multiple correlation of .11. These results must be considered in conjunction with the low corrected correlation between item 6 and the Social Impairment subscale (.27) as well as the consistency improvement derived from removing the item from the subscale. We consider these results may be due to item 6 excessive complexity (see Edwards, 1957) which seems to be assessing a high level of activation combined with low performance (“No paré, pero no cumplí con ninguna de las metas que me había puesto para cada día”). The results obtained so far lead us to question its inclusion on the test in both the original and the Spanish adaptation. The validity of the Spanish version was also supported by significant correlations found with other instruments: BDI-II, AAQ, ATQ, MCQ-30, STAI and EROS. The highest correlations were with the depression scales as in the English version. Furthermore, it was found that the association between the BADS total scale and depressive symptoms were not accounted for by anxiety symptoms. This data demonstrates the validity of the BADS construct, and shows the relationship between lack of activation and depressive symptoms particularly well (reflected in the BDI-II). However, it is worth to note that, as in previous research (Kanter et al., 2007; Kanter et al., 2009), the Activation subscale is the less correlated with depression than the remaining subscales, which may be reflecting a relative weakness of this subscale in terms of construct validity.

The high correlations between BADS, ATQ and MCQ-30 revealed that ruminative, brooding attitudes are very important in maintaining depression. It is worth mentioning that this finding may be related to brooding as a common condition of psychological disorders (Pérez-Álvarez, 2008). The correlation between the AAQ and the BADS, particularly with the Avoidance/Rumination subscale, also pointed out the importance of avoidance associated with states of depression. Finally, the correlations between EROS and BADS, particularly with the Social Impairment subscale, are of central importance because they supported the primary aspect of behavioral activation therapies.

Table 6
Means and standard deviations of the Spanish BADS total scale and subscales for the total sample and by gender:

<table>
<thead>
<tr>
<th></th>
<th>Total (n = 263)</th>
<th>Men (n = 76)</th>
<th>Women (n = 187)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activation</td>
<td>22.67</td>
<td>21.36</td>
<td>23.20</td>
</tr>
<tr>
<td>Avoidance/Rumination</td>
<td>22.20</td>
<td>22.89</td>
<td>21.91</td>
</tr>
<tr>
<td>Work/School Impairment</td>
<td>13.42</td>
<td>12.95</td>
<td>13.61</td>
</tr>
<tr>
<td>Social Impairment</td>
<td>8.33</td>
<td>9.95</td>
<td>7.67</td>
</tr>
<tr>
<td>BADS Total</td>
<td>86.72</td>
<td>83.57</td>
<td>88.01</td>
</tr>
</tbody>
</table>

Total scale and subscale means for the non-clinical group in our sample are similar to those previously reported by Kanter et al. (2007) and Raes et al. (2010) in their non-clinical samples, while total scale and subscale means for the clinical group are similar to those reported by Kanter et al., and Raes et al. in their clinical samples. The Spanish BADS has also been found to be sensitive enough to detect the differences between general non-clinical and clinical samples (t test). More precisely, when we make groups with different diagnoses...
(MDD, Anxiety and another category of pathologies that includes gambling, psychotic, border personality disorder, etc) the MANOVA revealed significant differences in BADS total scale only between the non-clinical group and the MDD diagnoses group. As it is worth observing in Figure 2, the samples of anxiety and other pathologies show more activation than the depression one, and the score did not reach a significant difference with non-clinical sample. This result implies some doubts about the advisability of a therapy based on behavioral activation in disorders other than depression, as the BATD version of the therapy has done (e.g., Hopko, Robertson, & Lejuez, 2006), and emphasize the ultimate role of activation for the treatment of depressed patients. The fact that no significant differences were found in the Activation subscale among different groups emphasizes the previously mentioned weakness of this subscale.

The clinical sample is one of the strongest points in favor of this adaptation. Kanter et al. (2007) remarked that replication of the results in different samples, particularly clinical, is necessary for the BADS. We now have data about its usefulness with patients, and our results with depressed subjects show the same tendency reported by Kanter et al. (2009). With regard to this we emphasize that our alpha coefficients are closer to those reported by Kanter et al. (2009) when they use a clinical sample.

The satisfactory behavior of our adaptation in the statistical tests gives additional support to the theoretical framework from which it was constructed. According to Kanter et al. (2007), the BADS items were developed according to the Behavioral Activation Treatment Manual (Martell et al., 2001), and this strategy may have resulted in the exclusion of certain areas of interest not covered in the manual. Discriminant validity data have now been acquired with the new correlations presented in this convergent adaptation. Nevertheless, we agree that additional demonstrations, including predictions of changes in depression over the course of therapy, would further understanding of this scale’s potential.

The items on the BADS have demonstrated their efficacy with a heterogeneous sample. However, we are aware that it is limited by the characteristics of the general sample, which was not large enough for really extensive generalization and did not have a good male/female balance. Moreover, we have no test-retest reliability data and so we cannot come to any conclusions on its temporal stability in the Spanish population. Despite these limitations, we believe it can be useful to other researchers interested in assessing such important mood disorder concepts as activation and avoidance.

References


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Por favor, lea con atención cada frase y rodee con un círculo el número que mejor refleje su situación durante la pasada semana, incluyendo el día de hoy.

<table>
<thead>
<tr>
<th>En absoluto</th>
<th>Completa-mente cierto</th>
</tr>
</thead>
</table>

1. Me quedé en la cama demasiado tiempo, aunque sabia que tenía cosas pendientes. 0 1 2 3 4 5 6
2. Había ciertas cosas que tenía que hacer y que no hice 0 1 2 3 4 5 6
3. Estoy contento por el tipo y la cantidad de cosas que hice 0 1 2 3 4 5 6
4. Me comprometí con una serie de actividades amplia y variada 0 1 2 3 4 5 6
5. Acerté en mis decisiones sobre el tipo de actividades y situaciones en las que me metí 0 1 2 3 4 5 6
6. No paré, pero no cumplí con ninguna de las metas que me había puesto para cada día 0 1 2 3 4 5 6
7. Me moví y cumplí las metas que me había fijado 0 1 2 3 4 5 6
8. La mayor parte de lo que hice fue para escaparme o evitar lo que me fastidiaba 0 1 2 3 4 5 6
9. Hice cosas para evitar la tristeza y otras emociones dolorosas 0 1 2 3 4 5 6
10. Trató de no pensar en ciertas cosas 0 1 2 3 4 5 6
11. Hice cosas incluso a pesar de lo que costaba hacerlas porque tenían que ver con mis objetivos a largo plazo 0 1 2 3 4 5 6
12. Llevé a cabo una tarea ardua pero que merecía la pena 0 1 2 3 4 5 6
13. Perdí mucho tiempo dando vueltas a mis problemas 0 1 2 3 4 5 6
14. Pasé tiempo tratando de encontrar algún modo de resolver cierto problema, pero no llegué a poner en práctica ninguna de las posibles soluciones 0 1 2 3 4 5 6
15. Con frecuencia perdí tiempo pensando en mi pasado, en gente que me había herido, en errores que había cometido, y en lo malo de mi vida 0 1 2 3 4 5 6
16. No vi a ninguno de mis amigos 0 1 2 3 4 5 6
17. Estuve encerrado en mí mismo y callado, incluso entre gente a la que conozco bien 0 1 2 3 4 5 6
18. No estuve nada sociable, a pesar de las oportunidades que tuve 0 1 2 3 4 5 6
19. Ahuyenté a la gente con mi negatividad 0 1 2 3 4 5 6
20. Hice cosas para aislarme del resto de la gente 0 1 2 3 4 5 6
21. Robé tiempo a las clases / al trabajo / sencillamente porque estaba muy cansado o no me sentía con ganas de ir 0 1 2 3 4 5 6
22. Mi trabajo / deberes / obligaciones / responsabilidades se resintieron porque me faltó la energía que necesitaba 0 1 2 3 4 5 6
23. Organicé mis actividades diarias 0 1 2 3 4 5 6
24. Me ocupé sólo de actividades que me distrajeran lo bastante como para no sentirme mal 0 1 2 3 4 5 6
25. Me empecé a encontrar mal cuando otros de alrededor hablaron de sentimientos y experiencias negativos 0 1 2 3 4 5 6