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# Experiential Avoidance in Clinical and Non-Clinical Samples: AAQ-II Portuguese Version

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**Abstract**

The aim of the following paper was to adapt and validate the Portuguese version of the Acceptance and Action Questionnaire- II (AAQ-II), which measures Psychological Flexibility/Inflexibility, central components in Acceptance and Commitment Therapy. We assessed the psychometric properties of this scale in both general population and clinical samples. Exploratory Factor Analysis supported a single-factor structure with seven items and results from a Confirmatory Factor Analysis showed the goodness of fit of the model. This version also demonstrated a good level of internal consistency and good convergent and discriminant validity. Overall, the results stressed out that this Portuguese version of AAQ-II is a consistent and valid scale.
*Key words*: AAQ-II, psychological inflexibility, factor analysis.

Acceptance and Commitment Therapy (ACT; Hayes, Strosahl, & Wilson, 1999) makes part of the so-called third wave of Cognitive Behavior Therapies, more focused on targeting the context and functions of psychological events, and aiming to change the way each individual relates with psychological phenomena (Hayes, Luoma, Bond, Masuda, & Lillis, 2006).

One of the main constructs of the ACT model is experiential avoidance (EA), which can be operationalized as a verbally mediated process that involves an unwillingness to be in contact with negative evaluated private events (as thoughts, memories, feelings, physiological sensations and action tendencies) and deliberate efforts to control the form frequency, intensity or duration of these private events or the contexts that occasion them, even when doing so leads to actions that are incongruent with valued goals (Hayes, 1994; Hayes *et al*., 1999; Hayes, Wilson, Gifford, Follete, & Strosahl, 1996). Because EA is an effective short-term strategy that produces some immediate relief of the intense emotional experiences, over time its use becomes negatively reinforced, increasing the likelihood of experiential avoidance strategies being repeatedly used when facing similar situations in the future (Chapman, Gratz, & Brown, 2006). There is a general agreement concerning the idea that EA becomes a disordered process when it is ‘‘applied rigidly

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and inflexibly, such that enormous time, effort, and energy is devoted to managing, controlling, or struggling with unwanted private events" (Kashdan, Barrios, Forsyth, & Steger, 2006, p.1302; Hayes *et al*., 1996). It seems that the individual's life becomes reduced to a continuous struggle, progressively more away from valued life goals (Hayes *et al*., 1999), since individuals tend to forget what they want for their lives beyond relief from psychological pain (Hayes *et al*., 2006). Consequently, EA interferes with the ability to know when to maintain or to modify the behavior in function of valued goals (Chawla & Ostafin, 2007; Boulanger, Hayes, & Pistorello, 2010).

Indeed, the rigid and inflexible use of EA can be counterproductive as it conducts to an increase of the frequency and intensity of avoided thoughts and emotions (Blackledge & Hayes, 2001). This occurs because strategies of avoidance are verbal and trying to avoid a particular thought includes following the verbal rule that contains that same thought (Hayes *et al*., 1996), what increases its functional importance, making it more salient (Hayes *et al*., 2006). In line with this, a growing body of research suggests that EA can be conceptualized as a pathological process implicated in the etiology and maintenance of many forms of psychopathology (Boulanger, Hayes, & Pistorello, 2010; Hayes *et al*., 1996; Hayes *et al*., 1999; Hayes *et al*., 2006; Ruiz, 2010), since that when applied inflexibly and chronically results in a diminished contact with contextual contingencies necessary to the attainment of valued goals (Bond *et al*., 2011; Hayes *et al*., 2006).

In general, the ACT model emphasizes psychological flexibility, defined as the ability to experience the present moment more aware and actively, changing or persisting with the behavior in function of contextual contingencies and valued goals (Hayes *et al*., 2006). In contrast, psychological inflexibility refers to an entanglement in self-evaluations and negative thoughts and feelings (cognitive fusion) as well as avoidant strategies used to decrease the associated distress (experiential avoidance), resulting in difficulties related to being sensitive to contextual contingencies and behaving according to identified values and goals (Hayes *et al*., 1999; Bond *et al*., 2011).

The Acceptance and Action Questionnaire (AAQ) was developed within ACT by Hayes and colleagues (2004) as a measure to assess experiential avoidance and psychological inflexibility (Bond *et al*., 2011). Initially this instrument, developed in multiple versions with 9, 16 and 49 items (Hayes, Strosahl, Wilson, Bissett, Pistorello, Toarmino *et al*., 2004; Bond & Bunce, 2003), proved to be very helpful in the assessment of experiential avoidance and also crucial in the evaluation of ACT treatment results (Bond et al., 2011). Nonetheless, this measure showed a lack of internal consistency across several studies since its initial validation (Hayes *et al*., 2004), hypothesized to result partially from the complexity associated no only to its items, as well as to the constructs it addresses, derived from the underlying contextual theory (Bond *et al*., 2011). Moreover the factorial structure was found to be inconsistent, since the 16 items version showed to have one-factor in one study (Hayes *et al*., 2004), but also to be a two-factor measure in other study (Bond & Bunce, 2003).

In order to overcome these psychometric weaknesses of the AAQ, a 10-item second version was developed and research confirmed the scale reliability. Subsequent exploratory and confirmatory factor analysis yielded a single-factor structure for this measure of the construct and established a final version of the questionnaire constituted

by 7 items. In the original study AAQ-II showed a good level of internal consistency (.84), test-retest reliability ($r$= .81, in 3 months, and $r$= .79, in 12 months), and construct validity. Bond and colleagues (2011) found that higher AAQ-II scores are associated with greater levels of depressive symptoms, anxiety and stress, thought suppression and psychological distress, suggesting that psychological inflexibility may function as a risk factor for mental ill-health. The psychometric study of both versions, correlated at a high level ($r$= .96), recommends the selection of the psychometrically stronger 7-item version, although authors also defend the validity of the initial 10-item version (Bond *et al*., 2011).

Therefore, the aims of the present study were to (i) explore the factorial structure of the Portuguese version of AAQ-II; (ii) to investigate its psychometric properties and relation with several psychological and psychopathological constructs; (iii) and, finally, to validate this self-report measure in both general and clinical populations.

## Study 1: Exploratory Factorial Analysis

### Method

#### *Participants*

Participants in this study were 753 subjects from the general population, with 529 undergraduate students recruited from the University of Coimbra (Portugal) (70.3%) and 224 subjects recruited from the normal population (29.7%). 85.1% ($n$= 641) were female, mean age 25.64 ($SD$= 11.97), and 14.9% males ($n$= 112), mean age 31.85 ($SD$= 15.20). Seventy eight per cent of the participants are single ($n$= 589). Fifteen per cent of the normal population subjects have middle class professions ($n$= 116). The participants years of educations mean is 14 ($SD$= 2.51).

#### *Measures*

The Acceptance and Action Questionnaire (AAQ-II) was developed by Bond, Hayes, Baer, Carpenter, Guenole, Orcutt, Waltz, & Zettle (2011). After obtaining permission of the original authors one bilingual English-Portuguese speaker translated the English version into Portuguese. Then, two health professionals with large clinical experience in ACT treatment protocols conducted an independent translation of the questionnaire, in order to preserve the functional equivalence of the Portuguese version. Both translations were compared and adjustments were made. A back translation of this version was made by a native speaker. Minor adjustments were required for preserving the conceptual equivalence of the scale items in its final version.

The scale consists of 7-items and is introduced by the following sentences: "Below you will find a list of statements. Please rate how true each statement is for you by circling a number next to it". People must rate each statement on a 7-point Likert scale ranging from 1 (never true) to 7 (always true). This scale reflects the single domain of psychological inflexibility with higher scores indicating greater psychological inflexibility, or experiential avoidance. In their study, Bond and colleagues (2011) found a .84 mean $\alpha$ coefficient across six samples (ranging between .78 and .88).

*Data analysis*

We conducted an Exploratory Factor Analysis (EFA) through the Statistical Package for Social Sciences (SPSS) version 17.0.

## RESULTS

Prior to the Exploratory Factor Analyses, the suitability of data for factor analysis was assessed, considering the sample size and the strength of the relationship among the items. On one side, the general recommendation is to use a sample as larger as possible. Tabachnick and Fidell (2007) suggest, at least, 300 cases for conducting a factor analysis; while Nunnally (1978) recommends a ratio of 10 cases for item. Our sample composed by 753 participants accomplishes it. On the other side, inspection of the correlation matrix reveals that the majority of items present coefficients of .3 or above (Pallant, 2010).

As in the original statistical procedures we conducted an Exploratory Factor Analysis with the Principal Component Analysis (PCA) method of parameter estimation, to identify the smallest number of factors that can be used to best describe the underlying interrelationships among variables. Considering the Kaiser criterion our PCA revealed the presence of two components (respectively, 4.73 and 1.14).

Following the original authors, and to confirm these results, we conducted a Parallel Analysis (PA) which is an accurate method to extract factors, more precise that both Kaiser's criterion and Catell's scree test. It has the advantage of diminishing the problem of components overextraction that usually affects subsequent analysis or component rotation (Hubbard & Allen, 1987; Zwick & Velicer, 1986). According to this procedure, we need to compare eigenvalues obtained from the PCA correlation matrix (prior rotation), with the eigenvalues obtained in a random matrix of the PA of the same research data. After which we should retain the number of factors that corresponds to the PCA eigenvalues greater than their respective PA eigenvalues (Franklin, Gibson, Robertson, Pohlmann, & Fralish, 1995). In our data, PA showed that only two components have eigenvalues exceeding the corresponding criteria value for the randomly generated data matrix, what attested for the two-component solution obtained initially by PCA.

To access the factorability of our data, we analyzed The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and the Bartlett's test of sphericity. The KMO value was .89, exceeding the recommended value of .60 (Kaiser, 1970) and Bartlett's Test of Sphericity ($\chi^2(45)= 3262.738$; $p < .001$) reached statistical significance (Bartlett, 1954), supporting the factorability of the correlation matrix and reveling that it is appropriate to proceed with a factor analysis (Tabachnick & Fidell, 2007).

In respect to the first PCA, the two component-solution obtained explained 59% of the total variance, with the first factor (composed by 6 items) contributing 47.33% and the second factor (composed by 3 items) accounting for 11.38%.

In line with the procedures used by the original authors we then conducted a second EFA with the same estimation method and applied the oblique rotation (Direct

Oblimin). Results showed that the items factor loadings were all above .40 and that there were no cross-loadings, what indicated no reasons for removing any of the items (Ferguson & Cox, 1993; Tabachnick & Fidell, 2007).

Nevertheless, the analysis of others indices gave support to the idea that AAQ-II in the Portuguese population is also a one-dimensional measure. As in the original scale, the seven 'negatively' worded items saturated in the first component, and the remaining three positively worded items saturated in the second component, what is possibly a problem of method effect and not a theoretical difference between the items on each factor. This result replicates the original results, what reinforces the conceptualization of AAQ-II as a unidimensional measure of psychological flexibility/inflexibility by its authors (Bond *et al*., 2011). Furthermore, the difference between the variance explained by the two components (and the second factor only adds a small amount), and to the ratio between the first to the second eigenvalue (Reise, Morizot, & Hays, 2007) both give support to this idea. Moreover, when we compared the psychometric functioning of both components we found that the second factor (composed by 3 items) showed an unacceptable value of internal consistency (Cronbach $\alpha$= .44) and all the items have item-total correlations below .30; when compared to the first component that presented an excellent level of internal consistency (Cronbach $\alpha$= .90), and higher item-total correlations (that range between .67 and .76).

For all of the above cited reasons we decided to remove the three items on the second component, namely items 1, 6 and 10. Finally, we conducted a third EFA with the same statistical procedures on the remaining seven negatively worded items. The one factor identified explained 63.15% of the total variance of the scale, with factor loadings ranging between .76 and .84, as is shown in Table 1. All seven items have item-total correlations above .67, what means that all of them contribute positively to this final measure of psychological inflexibility/flexibility.

The $\alpha$ coefficient obtained in this last version of Portuguese version of AAQ-II (.90) was indicative of an excellent estimate of internal consistency (DeVellis, 2003), and very similar the reported coefficient (.88) found by the original authors of the scale (Bond *et al*., 2011). Additionally, all items positively contribute to the internal consistency of the Portuguese AAQ-II, since the overall reliability does not improve if we delete any item of the scale.

*Table 1*. Means (M), Standard Deviation (SD), Communalities ($h^2$), Factor loadings ($\lambda$), Item-total Correlations (r), and Cronbach's Alpha if item deleted ($\alpha$) for the Portuguese version of AAQ-II ($n$= 753).

| Items | *M* | *SD* | $h^2$ | $\lambda$ | *r* | $\alpha$ |
|---|---|---|---|---|---|---|
| AAQ-II 2 | 4.97 | 1.48 | .67 | .82 | .74 | .88 |
| AAQ-II 3 | 5.08 | 1.45 | .62 | .79 | .70 | .89 |
| AAQ-II 4 | 4.50 | 1.58 | .61 | .78 | .70 | .89 |
| AAQ-II 5 | 5.19 | 1.61 | .70 | .84 | .76 | .88 |
| AAQ-II 7 | 4.73 | 1.38 | .61 | .78 | .70 | .89 |
| AAQ-II 8 | 4.78 | 1.53 | .58 | .76 | .67 | .89 |
| AAQ-II 9 | 4.72 | 1.46 | .62 | .79 | .71 | .89 |

## STUDY 2: CONFIRMATORY FACTORIAL ANALYSIS

### METHOD

*A. Non-clinical Sample Participants*

Participants in this study were 409 subjects from the Portuguese general population. 56.2% (*n*= 230) were female, *Mean age* 37.05 (*SD*= 10.93), and 43.8% males (*n*= 179), *Mean age* 35.68 (*SD*= 12.10). Fifty one per cent are married (*n*= 210) and thirty eight per cent are single (*n*= 155). The participants years of education mean was 14 (*SD*= 3.38).

*Data analysis*

In this second study we conducted Confirmatory Factor Analysis (CFA) through AMOS 17.0 in two different samples, with the aim of testing the latent unidimensional structure of the Portuguese 7-items version of AAQ-II found through the Exploratory Factor Analysis of Study 1.

We tested the data for univariate and multivariate normality, and all items showed acceptable values of asymmetry and univariate and multivariate kurtosis in both clinical and non-clinical samples, according to Finney and DiStefano (2006).

### RESULTS

We performed a CFA to test a single-factor model with the Maximum Likelihood estimator, one of the estimation methods most frequently used in this statistical procedure (Brown, 2006), also used by the original authors. In our diagram, with experiential avoidance as the latent variable, we tested the 7 above cited variables. Additionally, and accordingly to the original authors procedure, we specified the same correlated measurement errors among items 2 and 5 due to their similar content. More precisely in the Portuguese version both items include the same expression "painful memories", what illustrates equal key terms in both items.

Concerning the global adjustment of the tested model, we chose several goodness-of-fit measures, namely the Chi-Square ($\chi^2$), the Normed Chi-Square (*NC*), the Tucker Lewis Index (*TLI*), the Comparative Fit Index (*CFI*) and the Root-Mean Square Error of Approximation (*RMSEA*).

In our factor-solution the value of Chi-Square was statistically significant ($\chi^2(13)$= 49,687, $p$ <.001). However, this classic measure is known to be affected by several factors, among them the sample size; therefore resulting in a problematic test, that can lead to the conclusion of lack of model fit even when the model is appropriated (Bollen, 1989; DeCoster, 1998; Jöreskog, 1969). Indeed, the Relative/Normed Chi-Square is a way of minimizing the impact of sample size on the Chi-Square value. In this particular case, the value obtained might be considered within an acceptable ratio ($\chi^2$/df= 3.82), given that reference values range from 2 to 5 (Bollen, 1989; Wheaton, Muthen, Alwin, & Summers, 1977; Tabachnick, & Fidell, 2007).

In respect to the other goodness-of-fit tests [*TLI*= .96; *CFI*= .97; *RMSEA*= .08], both Tucker Lewis Index and Comparative Fit Index are greater than the reference value indicative of good model fit (.95) (Hu & Bentler, 1998; Brown, 2006); and the Root-Mean Square Error of Approximation was also between .05 and .08, representative of a reasonable error and an acceptable fit (Hu & Bentler, 1998; Browne & Cudeck, 1993).

Thus, the overview of the global adjustment indices allow us to confirm that the model tested has an acceptable global model fit. Table 2 presents more specific information regarding local adjustment indices to give support to the acceptability of the model in study. According to Tabachnick and Fidell (2007), the items factor loadings should be above the lower acceptable value of meaningful correlation (.40), which clearly matches our data given that all standardized regression weights ranged from .63 to .81. In addition, the coefficients of determination, corresponding to the squared multiple correlations ($r^2$) that describe the amount of variance that the common factor accounts for the observed variables, also have acceptable values ranging from .40 to .66. Finally, the corrected item-total correlations showed values above .30, a cutoff reference for the items power of discrimination, attesting for the adequacy and reliability of the 7 items of the tested Portuguese version of the AAQ-II.

Just as with the original version, all the unstandardized regression weights (ranging from .92 to 1.15) were statistically significant at $p$ <.001; and the unstandardized covariance between the item 2 and 5 (the two items that have similar content) was significant in samples, the clinical and non-clinical.

Lastly, the reliability analysis of this questionnaire showed an $\alpha$ coefficient of .89, a high value of internal consistency.

### *B. Clinical Sample Participants*

Participants from the clinical sample were recruited from several public and private mental health units at Portugal, after approval of all ethical committees on mental health. A first contact with participants was established by their Psychotherapist or Psychiatrist on the day of one of their appointments. All patients who accepted to participate in this study agreed to schedule other appointments in order to be interviewed and to complete self-report measures. All the diagnoses were confirmed through structured

*Table 2*. Standardized Regression Weights, Squared Multiple Correlations ($r^2$), and Item-Total correlations ($r$) for the 7-items AAQ-II Portuguese version for a general population sample ($n$= 409) and a clinical sample ($n$= 275).

| Items | Standardized loadings | | $r^2$ | | $r$ | |
|---|---|---|---|---|---|---|
| | Non-clinical Sample | Clinical Sample | Non-clinical Sample | Clinical Sample | Non-clinical Sample | Clinical Sample |
| AAQ-II 2 | .70 | .72 | .49 | .51 | .74 | .74 |
| AAQ-II 3 | .76 | .82 | .58 | .68 | .70 | .77 |
| AAQ-II 4 | .63 | .73 | .40 | .53 | .70 | .66 |
| AAQ-II 5 | .75 | .70 | .57 | .49 | .76 | .73 |
| AAQ-II 7 | .70 | .74 | .50 | .55 | .70 | .68 |
| AAQ-II 8 | .72 | .71 | .51 | .51 | .67 | .65 |
| AAQ-II 9 | .81 | .76 | .66 | .58 | .71 | .71 |

clinical interviews, namely the Structured Clinical Interview for Axis I (SCID-I, First, Spitzer, Gibbon, & Williams, 1996) and the Structured Clinical Interview for Personality Disorders (SCID-II, First, Gibbon, Spitzer, Williams, & Benjamin, 1997).

A total of 297 patients referred consented to participate in the research, 3 declined to take part and 19 were excluded because of not being able to understand and complete the self-report measures. Data was collected between June of 2007 and December of 2010 and this sample is part of a larger investigation.

All the participants in this clinical sample met criteria for, at least, one Axis II disorder. Specifically, all these subjects received as their main diagnosis one of the following Personality Disorders: 27% Avoidant Personality Disorder (*n*= 74), 43% Obsessive-Compulsive Personality Disorder (*n*= 118), and 30% Borderline Personality Disorder (*n*= 83). Eighty two per cent of the total clinical sample (*n*= 225) presented comorbility with, at least, one Axis I disorder. Table 3 presents the comorbility rates of this clinical sample with both Axis I and II disorders.

Altogether the 275 patients from the clinical sample were 221 female (80.4%) and 54 male (19.6%). Seventy three per cent are single (*n*= 200) and twenty two per cent are married (*n*= 60). 39% (*n*= 107) were students and 24% have middle class professions (*n*= 67). Participants years of education mean is 15 (*SD*= 2.93). The 74 subjects with Avoidant Personality Disorder were 50 females (67.6%), mean age of 27.72 (*SD*= 8.17), and 24 male (32.4%) with 29.58 as their age mean score (*SD*= 8.78). The group constituted by the Obsessive-Compulsive Personality patients has 96 female participants (81.4%), 28.33 mean age score (*SD*= 8.92), and 22 male (18.6%) with a mean age of 33.77 (*SD*= 8.76). Participants meeting criteria for Borderline Personality Disorder were 75 female (90.4%), with a mean score of 29.67 (*SD*= 8.23), and 8 male (9.6%), with 25.38 mean age score (*SD*= 6.61).

## RESULTS

In this different sample we conducted a CFA with Maximum Likelihood as the estimation method, and tested the same one-factor model of the AAQ-II 7-items version, with one correlated measurement errors among two similar items (2 and 5). Also, the Chi-Square ($\chi^2$), the Normed Chi-Square (*NC*), the Tucker Lewis Index (*TLI*), the Comparative Fit Index (*CFI*) and the Root-Mean Square Error of Approximation (*RMSEA*) were the indices under consideration to assess model fit.

On one side, Chi-Square ($\chi^2(13) = 43{,}673$, $p < .001$) of this factor-solution resulted statistically significant, a common problematic outcome in these type of factor analysis in large samples (Jöreskog, 1969). Yet, on the other side, the Relative/Normed Chi-Square value ($\chi^2/df = 3.36$) showed itself to be appropriate (Bollen, 1989; Wheaton et al., 1977; Tabachnick & Fidell, 2007). As for the other indices, similar results to our first CFA in general population were found: *TLI*= .96; *CFI*= .97; *RMSEA*= .09. Once again, both *TLI* and *CFI* situated above .95 showing a good model fit (Brown, 2006; Hu & Bentler, 1998). In the particular case of RMSEA, even though the value found (.09) represents a "mediocre fit" (MacCallum, Browne, & Sugawara, 1996), several authors affirm that *RMSEA* values under .10 can be considered, since only values above .10

*Table 3*. Comorbility rates of the clinical sample with Axis I and other Axis II Disorders (*n*= 275).

| Comorbilities | Clinical Sample Main Diagnosis (n) | | |
|---|---|---|---|
| | AP (n = 74) | OCP (n = 118) | BP (n = 83) |
| AXIS I | | | |
| Anxiety Disorders | 61 | 52 | 23 |
| Panic Disorder | 2 (2.7%) | 12 (10.2%) | 4 (4.8%) |
| Generalized Social Phobia | 56 (75.7%) | 24 (20.3%) | 11 (13.3%) |
| Specific Social Phobia | 2 (2.7%) | 4 (3.4%) | 2 (2.4%) |
| Obsessive-Compulsive Disorder | 1 (1.4%) | 12 (10.2%) | 6 (7.2%) |
| Mood Disorders | 39 | 42 | 48 |
| Major Depressive Disorder | 36 (48.6%) | 40 (33.9%) | 48 (57.8%) |
| Distimia | 3 (4.1%) | 2 (1.7%) | 0 |
| Eating Disorders | 21 | 20 | 17 |
| Anorexia | 7 (9.5%) | 9 (7.6%) | 9 (10.8%) |
| Bulimia | 14 (19%) | 4(3.4%) | 6 (7.2%) |
| EDNOS | 0 | 7 (5.9%) | 2 (2.4%) |
| AXIS II | | | |
| Avoidant | - | 33 (28%) | 49 (59.1%) |
| Dependent | 6 (8.1%) | 0 | 7 (8.4%) |
| Obsessive-Compulsive | 35 (47.4%) | - | 49 (59%) |
| Passive-Agressive | 5 (6.8%) | 2 (1.7%) | 6 (5.2%) |
| Depressive | 32 (33.3%) | 26 (22%) | 41 (49.4%) |
| Paranoid | 4 (5.5%) | 4 (3.3%) | 13 (15.6%) |
| Histrionic | 0 | 0 | 2 (2.4 %) |
| Narcissist | 0 | 0 | 1 (1.8%) |
| Borderline | 0 | 0 | - |

Notes: AP= Avoidant Personality; OCP= Obsessive Compulsive Personality; BP= Borderline Personality; EDNOS= Eating disorder not otherwise specified.

represent a poor fitting model therefore not acceptable (Browne & Cudeck, 1993; Hu & Bentler, 1999). Apart from the evident arbitrariness in the choice of cutoff points for model fit (MacCallum *et al*., 1996), it is worth noting that RMSEA is often referred to as an absolute fit index but it is influenced by several features of the model under test, resulting in a subjective measure. Therefore, several authors reclaim the fact that the traditional cutoff is often too high (Browne & Cudeck, 1993; Steiger, 1989). As a final point respecting to global adjustment of this model, results of the CFA in this particular sample show that the lower limit of the RMSEA ninety per cent confidence interval is of .06, coincident with the conventional and recommended RMSEA criteria for model fit, supporting the global model fit.

Similarly to the results found through the CFA in the general population, all factor loadings are above .70, clearly above the recommended cutoff point (Tabachnick & Fidell, 2007). The same happens with the squared multiple correlations (all above .49) and the corrected item-total correlations (superior to .65). These results can be seen in Table 2. Alpha coefficient was computed and a final score of .90 attests once again the good internal consistency of this scale.

Altogether this data points to the acceptability of the model in study -the 7-items version of the Portuguese AAQ-II- for people with AXIS II Disorders.

In line with this finding, an independent-samples t-test was conducted to compare AAQ-II scores obtained in both clinical and non-clinical samples (used in Study 2) in order to explore its ability to discriminate groups. Results revealed the existence of significant differences between scores ($t$ (518.786)= 19.23, $p$ <.001), with a AAQ-II final score significantly higher in the clinical sample (*Mean*= 33.47, *SD*= 9.46) when compared to the non-clinical sample (*Mean*= 20.14, *SD*= 7.97). The magnitude of the differences in the means (*Mean* difference= 13.33, 95% CI: 11.97-14.69) can be considered very large (*eta square*= .35), according to the guidelines proposed by Cohen (1988, pp.284-287). These particular results suggest that AAQ-II can be reliable measure that offers a good power of discrimination between clinical and non-clinical groups.

## STUDY 3: CONVERGENT AND DIVERGENT VALIDITIES

### METHOD

#### *Participants*

This study was conducted on both samples already described in study 1 and 2.

#### *Measures*

We use in this study the following instruments:

*Acceptance and Action Questionnaire -AAQ-II* (Bond, Hayes, Baer, Carpenter, Guenole, Orcutt, Waltz, & Zettle, 2011) that is already described in study 1.

The short-form version of the *Depression, Anxiety and Stress Scales* (DASS-21): was developed by Lovibond and Lovibond (1995) and was translated and adapted to Portuguese by Pais-Ribeiro, Honrado and Leal (2004). The scale consists in 21 items distributed in three subscales designed to measure levels of depression (e.g., 'I couldn't seem to experience any positive feelings at all'), anxiety (e.g., 'I was aware of dryness of my mouth'), and stress (e.g., 'I found it difficult to relax'). Each item is rated on a 4-point scale (0= Did not apply to me at all; 3= Applied to me very much, or most of the time). In the original version, Lovibond and Lovibond (1995) found that all subscales have an adequate to good internal consistency with alpha's values of .81 for depression .73 for anxiety and .81 for stress subscales. In the present study, the three subscales have shown high internal consistencies (depression subscale Cronbach's $\alpha$= .90; anxiety subscale Cronbach's $\alpha$= .88; stress subscale Cronbach's $\alpha$= .88).

*Positive and Negative Affect Schedule* (PANAS): developed by Watson, Clark and Tellegen (1988) and translated and adapted to Portuguese by Galinha and Pais-Ribeiro (2005). This questionnaire is constituted by 20 items, rated on a 5-point scale (from 1= Very slightly or not at all to 5= Extremely), and measures the extent to which the participant has experienced a particular emotion within a specified time period (in the Portuguese version the time frame adopted was "in the past few weeks"). The questionnaire is divided into two subscales, one measuring positive affect and the other measuring negative affect. In the original version, the internal consistency was good, specifically $\alpha$= .88 for the Positive Affect scale and $\alpha$= .87 for the Negative Affect scale. In our study, the Cronbach's alpha for the Positive and Negative Affect Scale was .87 and .91 respectively.

The *Ruminative Response Scale- short version* (RRS): developed by Treynor, Gonzalez and Nolen-Hoeksema (2003) and translated and adapted to Portuguese by Dinis, Pinto-Gouveia, Duarte and Castro (in press). The scale consists of 10 items from the original list of 22 which was developed by Nolen-Hoeksema and Morrow (1991). Treynor *et al*. (2003) have removed 12 items with a strong content overlap with depression and subjected the 10 remaining items to factor analysis procedures. Factor analysis reveal two subscales, namely Brooding and Reflection. The items of the Brooding subscale had negative connotation and described 'moody pondering' (e.g., 'Think: Why do I have problems that other people don't have?"). The Reflection items were 'neutrally valenced' and described engaging in attempts to analyze problems leading to negative mood (e.g., 'Go away by yourself and think about why you feel this way'). Each item is rated on a 4-point scale (1= Almost never; 4= Almost always). Higher scores on this scale indicating more use of rumination. In the original study, each factor showed adequate internal consistency with a Cronbach's alpha of .77 for Brooding and .72 for Reflection. In our sample the Cronbach's alpha was .78 for Brooding and .75 for Reflection.

*White Bear Suppression Inventory* (WBSI): developed by Wegner and Zanakos (1994) and translated and adapted to Portuguese by Pinto-Gouveia and Albuquerque (2011). This instrument consists of 15 items, rated in a 5-point Likert scale (1= Strongly disagree; 5= Strongly agree), that assess people's general tendency to suppress unwanted thoughts (e.g., 'I wish I could stop thinking of certain things'). High scores indicate greater tendencies to suppress thoughts. The original version showed good internal consistency, namely an alpha of Cronbach that ranged between .87 and .89 (Wegner & Zanakos, 1994). In our study, the instrument demonstrated a very good internal consistency ($\alpha$= .92).

*Difficulties in Emotion Regulation Scale* (DERS): developed by Gratz and Roemer (2004) and translated and adapted to Portuguese by Veloso, Pinto-Gouveia and Dinis (2010). This scale comprises 36 items, rated on a 5-point scale (from 1= Almost never; 5= Almost always), that evaluates different relevant difficulties in emotion regulation (i.e., greater emotion dysregulation), namely: lack of awareness of emotional responses (e.g., 'I am attentive to my feelings'); lack of clarity of emotional responses (e.g., 'I am confused about how I feel'); non-acceptance of emotional responses (e.g., 'When I'm upset, I feel guilty for feeling that way'); limited access to emotion regulation strategies perceived as effective (e.g., 'When I'm upset, I believe that wallowing in it is all I can do'); difficulties controlling impulses when experiencing negative emotions (e.g., 'When I'm upset, I have difficulty controlling my behaviors'); and difficulties engaging in goal-directed behaviors when experiencing negative emotions (e.g., 'When I'm upset, I have difficulty focusing on other things'). Some of the items were recoded so that higher scores in each subscale indicating greater difficulties in emotion regulation. The original study showed good internal consistency, with Cronbach's alpha of .80 or higher to all subscales. In our study, the instrument presented an adequate to good internal consistency in each subscale, with the following alpha of Cronbach's values: lack of emotional awareness ($\alpha$= .71), lack of emotional clarity ($\alpha$= .73), non-acceptance of emotional responses ($\alpha$= .86), difficulties in engaging in goal-directed behavior ($\alpha$= .79), impulse control difficulties ($\alpha$= .83) and limited access to emotional regulation strategies ($\alpha$= .87).

*Other As Shamer Scale* (OAS): developed by Allan, Gilbert and Goss (1994) and Goss, Gilbert and Allan (1994) and translated and adapted to Portuguese by Matos, Pinto-Gouveia, and Duarte (2011). The scale consists of 18 items measuring external shame

(global evaluations about how others judge the self). Items include: 'Other people put me down a lot', 'Other people see me as small and insignificant' and 'Others are critical or punishing when I make a mistake'. Each item is rated on a 5-point scale (0= never; 4= almost always). Higher scores on this scale reveal high external shame. In the original study the scale showed high internal consistency with a Cronbach's alpha of .92. In our sample the Cronbach's alpha for the total scale was .92.

*Self-Compassion Scale* (SCS): developed by Neff (2003) and translated and adapted to Portuguese by Castilho and Pinto-Gouveia (in press). The scale is constituted by 26 items, that measures six different aspects of self-compassion: self-kindness (e.g., 'I try to be loving towards myself when I'm feeling emotional pain'), self-judgment (e.g., 'I'm disapproving and judgmental about my own flaws and inadequacies'), common humanity (e.g., 'When I'm down and out, I remind myself that there are lots of other people in the world feeling like I am'), isolation (e.g., 'When I'm really struggling I tend to feel like other people must be having an easier time of it') , mindfulness (e.g., 'When I'm feeling down I try to approach my feelings with curiosity and openness') and over-identification (e.g., 'When I'm feeling down I tend to obsess and fixate on everything that's wrong'). Responses are given on a five-point scale from "Almost Never" to "Almost Always". In the original version, all of the subscales showed an adequate to good internal consistency: .78 (self-kindness), .77 (self-judgment), .79 (isolation), .75 (mindfulness) and .81 (over-identification) (Neff, 2003). In our study, the subscales showed an adequate to good internal consistency, .89 (self-kindness), .85 (self-judgment), .82 (isolation), .77 (mindfulness) and .78 (over-identification), with exception to Common humanity subscale that demonstrated an unacceptable internal consistency value ($\alpha$= .35).

*Five Facet Mindfulness Questionnaire* (FFMQ): developed by Baer, Smith, Hopkins, Krietemeyer and Toney (2006), based on a factor analytic study of five independently developed mindfulness questionnaires. It was translated and adapted to Portuguese by Gregório and Pinto-Gouveia (in press). This questionnaire consists of 39 items that are rated on a 5- point scale (from 1= Never or rarely true to 5= Very often or always true) and it measures five factors that appear to represent elements of mindfulness as it is currently conceptualized: observing (e.g., 'I pay attention to how my emotions affect my thoughts and behavior'), describing (e.g., 'I'm good at finding words to describe my feelings'), acting with awareness (e.g., 'It seems I am "running on automatic" without much awareness of what I'm doing'), non-judging of inner experience (e.g., 'I criticize myself for having irrational or inappropriate emotions') and non-reactivity to inner experience (e.g., 'I perceive my feelings and emotions without having to react to them'). Some items were recoded so that higher scores in each subscale indicating more mindfulness. In the original version, all the subscales showed an adequate to good internal consistency: observing $\alpha$= .83; describing $\alpha$= .91; acting with awareness $\alpha$= .87; non-judging $\alpha$= .87; non-reactivity $\alpha$= .75 (Baer et al., 2006). In this study, the alphas of Cronbach's values were: observing $\alpha$= .78, describing $\alpha$= .89, acting with awareness $\alpha$= .89, non-judging $\alpha$= .86 and non-reactivity $\alpha$= .66.

### *Data analysis*

In order to assess both convergent and divergent validities of AAQ-II, Cronbach's alphas were computed through SPSS 17.0.

## Results

To assess the convergent and divergent validities of the Portuguese version of the AAQ-II Pearson correlation coefficients were calculated with several psychological constructs (Table 4).

A strong positive correlation ($r$= .95) was found between both Portuguese versions of AAQ-II (7 and 10 items versions), similar to the original study in its magnitude ($r$= .96). This result supports the ability of this shorter version of the scale to acutely assess the construct of psychological inflexibility (Bond et al., 2011).

The convergent validity of the scale was first assessed with psychopathological measures, specifically the DASS-42 and PANAS. In line with the original study, psychological inflexibility was positively and significantly associated with depressive, anxiety and stress symptoms. Similarly it was highly correlated with current negative emotional states and, as expected, negatively related to the positive ones. These associations adds more evidence to the fact that the harder individuals try to control or

*Table 4*. Pearson Correlations between Experiential Avoidance in its both versions (7-item and 10-item AAQ-II) and with External Shame (OAS) ($n$= 597), Mindfulness (FFMQ), Depression, Anxiety and Stress (DASS21), Difficulties in Emotion Regulation (DERS), Rumination (RRQ-10), Self-compassion (SELFCS), Thought Suppression (WBSI) and Positive and Negative Affect (PANAS) ($n$= 753).

| | | AAQ-II (7-items) |
|---|---|---|
| | AAQ-II (10 items) | .95** |
| DASS-21 | Depression | .54** |
| | Anxiety | .50** |
| | Stress | .56** |
| PANAS | Positive Affect | -.29** |
| | Negative Affect | .58** |
| RRQ-10 | Brooding | .61** |
| | Reflection | .18** |
| | WBSI | .57** |
| DERS | Non-acceptance of Emotional Responses | .64** |
| | Difficulties in Engaging in Goal-Directed Behavior | .45** |
| | Impulse Control Difficulties | .63** |
| | Lack of Emotional Awareness | .14* |
| | Limited Acess to Emotional Regulation Strategies | .68** |
| | Lack of Emotional Clarity | .60** |
| | OAS | .57** |
| SELFCS | Self-kindness | -.42** |
| | Mindfulness | -.44** |
| | Common humanity | -.16 |
| | Self-Judgement | .44** |
| | Overidentification | .50** |
| | Isolation | .55** |
| FFMQ | Observe | .10** |
| | Describe | -.36** |
| | Actaware | -.43** |
| | Nonjudge | -.57** |
| | Nonreact | -.12** |

Notes: ** $p$ <.01; * $p$ <.05

escape from negative emotional states, the more they become vulnerable to experience and be trapped with them.

To explore the idea that experiential avoidance is related to dysfunctional emotional regulation processes, AAQ-II was also correlated with measures of emotion regulation strategies and difficulties. On one side, experiential avoidance was strongly and positively associated with a ruminative thinking (as measured by RRQ-10), what happens to be particularly true with the most pervasive ruminative style knows as brooding. As expected, AAQ-II was also strongly and positively associated with thought suppression (as measured by WBSI). These results give support to the idea of an avoidant function of rumination and thought suppression, both allowing for the avoidance of internal experiences and the suppression of negative emotions.

On the other side the lack of abilities linked to adaptive emotion regulation (as measured by DERS) were positively related with psychological inflexibility. Moreover, heightened levels of experiential avoidance are likely to be associated to the inability to access adaptive emotional regulation strategies and control one's behavior, as well as to the lack of clarity and acceptance of experienced emotions. These strong correlations were followed by a moderate association between this construct and difficulties in engaging in goal-directed behaviour. The weaker positive correlation was found with lack of emotional awareness, what seems to make sense given the inevitable impossibility of acknowledging unwanted private events when one is in continuous struggle to avoid them.

AAQ-II was positively and significantly associated with external shame (as measured by OAS). This seems to indicate that individuals, who fear being criticized, rejected or attacked by others, make use of more avoidant coping strategies, as a way to conceal those aspects of the self-believed to be unattractive and undesirable to others.

In the same line, AAQ-II was positively correlated with self-judgment, isolation and over-identification, which constitute the negative components of the Self-Compassion Scale. It seems that individuals that show higher levels of psychological inflexibility also tend to adopt an attitude of harshly self-criticism toward their inadequacies and suffering, feel isolated by their failures and disconnected from others, and over-identifying with painful thoughts and emotions. On the opposite, as expected, AAQ-II was negatively associated with two positive components of self-compassion -self-kindness and mindfulness- what possibly means that individuals who scored high on psychological inflexibility feel incapable of being warm and kind with themselves and to adopt a mindful perspective of their private events. Moreover, this pattern of results suggests that one must not avoid or try to push way painful private events in order to be capable of feeling self-compassion. Finally, common humanity as the ability of viewing one's life and inherent moments of suffering as part of the human experience also presented a negative correlation with psychological inflexibility, although it did not reach statistical significance, what might be due to the lack of internal consistency of this subscale.

Along with these last positive components of SCS, we also used a mindfulness questionnaire to explore the divergent validity of AAQ-II. When correlating psychological inflexibility with several mindfulness facets (as measured by FFMQ), one positive but low correlation was found between the AAQ-II and the observe facet. This is a consistent result with the assumption that this particular mindfulness skill might relate

differentially to other variables as a function of meditation experience. Besides, as expected, the AAQ-II was negatively and significantly associated with the remaining four facets of mindfulness, namely describe, act with awareness, nonjudge, and nonreact. The relationship between psychological inflexibility and nonjudge comes up as the strongest inverse association, suggesting that the higher individuals show the ability to make less reflections and critical judgments about their internal and external experiences, lower the level of experiential avoidance in which they engage in. This association was followed by two other moderate negative correlations between this same construct and both mindful abilities of acting with awareness and describing. More specifically, the extent in which individuals engage fully in the present moment together with the capacity of verbalizing their experiences are also negatively associated to their level of psychological inflexibility. Finally, nonreact was also negatively associated with the construct, even though this association presented a smaller magnitude.

## Discussion

The purpose of this paper was to adapt and validate the Portuguese version of Acceptance and Action Questionnaire-II. First, an Exploratory Factor Analysis yielded a single-factor structure for this scale constituted by seven items, as the original version. Then, a Confirmatory Factor Analysis was conducted in a large general population sample evidencing the good fit of this model under investigation. Furthermore, given the utility of this measure in psychotherapeutic contexts we also replicated these same findings in a large and heterogeneous clinical sample and results attested the goodness-of-fit of the factor structure of AAQ-II. A one-factor structure composed by seven items was confirmed by two CFA's, therefore representing the best model found to assess experiential avoidance/psychological inflexibility.

In terms of its psychometric characteristics, the reliability of the AAQ-II 7-items version was at a good level of internal consistency, with all the samples in study showing Cronbach's alpha coefficients over .89. Positive correlations were found between psychological inflexibility and psychopathological measures of depression, anxiety and stress. Furthermore, higher levels of psychological inflexibility were also associated to several dysfunctional emotion regulation processes, such as thought suppression, rumination and to the absence of crucial emotion regulation skills. Altogether, results confirm the convergent validity of the scale. In contrast, divergent validity of the Portuguese version of AAQ-II was established through the negative associations found with different self-compassion dimensions and also with the negative associations of several mindfulness facets with psychological inflexibility. In general, our results were very similar to the ones found by the original authors.

Finally, our confirmatory factor analysis of AAQ-II with a clinical sample, adds more evidence to the power of discrimination of the scale between clinical and nonclinical samples. Although we should have in consideration as a possible limitation the fact that our clinical sample is mainly constituted by Axis II patients and lacks patients with other Axis I disorders, we believe that it is in those patients that experiential avoidance plays a decisive role given the theoretical model of psychopathology underlying the

development of the scale. As a result, this validation of this self-report measure in both general and clinical populations seems to be a major contribution of this investigation.

Overall findings point to the adequate, reliable and valid structure of this particular version of the AAQ-II for the Portuguese population. Given the crucial importance of constructs as experiential avoidance and psychological inflexibility and their relationships with psychopathology, the existence of one valid and accurate instrument to measure them is one important and significant advance in assessment procedures on both research and clinical practice.

## REFERENCES

Allan S, Gilbert P, & Goss K (1994). An exploration of shame measures II: Psychopathology. *Personality and Individual Differences, 17,* 719-722. doi:10.1016/0191-8869(94)90150-3

Baer RA, Smith GT, Hopkins J, Krietemeyer J, & Toney L (2006). Using self-report assessment methods to explore facets of mindfulness. *Assessment, 13*, 27-45. doi:10.1177/1073191105283504

Bartlett M (1954). A note on multiplying factors for various chi-squared approximations. *Journal of the Royal Statistical Society, Series B 16*, 296-298.

Blackledge J & Hayes S (2001). Emotion regulation in acceptance and commitment therapy. *Psychotherapy in Practice, 57*, 243-255. doi:10.1002/1097-4679(200102)57:2<243::AID-JCLP9>3.3.CO;2-O

Bollen KA (1989). *Structural Equations with latent variables*. New York: Wiley.

Bond F & Bunce D (2003). The role of acceptance and job control in mental health, job satisfaction, and work performance. *Journal of Applied Psychology, 88*, 1057-1067. doi:10.1037/0021-9010.88.6.1057

Bond FW, Hayes SC, Baer RA, Carpenter KM, Guenole N, Orcutt HK, Waltz T, & Zettle RD (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire-II: A revised measure of psychological flexibility and experiential avoidance. *Behavior Therapy, 42*, 676-688.

Boulanger J, Hayes S, & Pistorello J (2010). Experiential Avoidance as a functional contextual concept. In A Kring & A Sloan (Eds.), *Emotion regulation and psychopathology: A transdiagnostic approach to etiology and treatment* (pp. 107-136). New York: Guilford Press.

Brown TA (2006). *Confirmatory factor analysis for applied research*. New York, NY: Guilford Press.

Browne MV & Cudeck R (1993). Alternative ways of assessing model fit. In KA Bollen & JS Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.

Chapman AL, Gratz KL, & Brown MZ (2006). Solving the puzzle of deliberate self-harm: The experiential avoidance model. *Behaviour Research and Therapy, 44*, 371-394. doi:10.1016/j.brat.2005.03.005

Chawla N & Ostafin B (2007). Experiential avoidance as a functional dimensional approach to psychopathology: An empirical review. *Journal of Clinical Psychology, 63*, 871-890. doi:10.1002/jclp.20400

Castilho P & Pinto-Gouveia J (in press). Self-Compassion: Validation study of Portuguese version of Self-Compassion Scale and its relationship between adverse childhood experiences, social comparison and psychopathology. *Psychologica*.

Cohen J (1988). *Statistical power analysis for the behavioural sciences (2nd ed.)*. Hillsdale, NJ: Lawrence Erlbaum Associates.

DeCoster J (1998). *Overview of Factor Analysis*. Retrieved August, 09, 2011 from http://www.stat-help.com/notes.html.

DeVellis RF (2003). *Scale development: Theory and applications (2nd ed.)*. Thousand Oaks, CA: Sage Publications.

Ferguson E & Cox T (1993). Exploratory factor analysis: A user's guide. *International Journal of Selection and Assessment, 1*, 84-94.

Finney S & DiStefano C (2006). Non-normal and categorical data in structural equation modeling. In G Hancock & R Mueller (Eds.), *Structural equation modeling: A second course* (pp. 269-314). Greenwich, Conn.: IAP.

Dinis A, Pinto-Gouveia J, Duarte C, & Castro T (in press). Validation study of the Portuguese version of the Ruminative Response Scale-Short version. *Psychologica*.

First MB, Spitzer RL, Gibbon M, & Williams JBW (1996). *Structured Clinical Interview for DSM-IV Axis I Disorders (SCID-I)*. Washington, DC: American Psychiatric Press.

First MB, Gibbon M, Spitzer RL, Williams JBW, & Benjamin LS (1997). *Structured Clinical Interview for DSM-IV Axis II Personality Disorders (SCID-II)*. Washington, DC: American Psychiatric Press.

Franklin S, Gibson D, Robertson P, Pohlmann J, & Fralish J (1995). Parallel Analysis: A method for determining significant principal components. *Journal of Vegetation Science, 6*, 99-106. doi:10.2307/3236261

Galinha I & Pais-Ribeiro J (2005). Contribution for the study of one Portuguese version of the Positive and Negative Affect Schedule (PANAS): II-psychometric study. *Análise Psicológica, XXIII*, 219-227.

Goss K, Gilbert P, & Allan S (1994). An exploration of shame measure-I: The Other As Shamer scale. *Personality and Individual Differences, 17*, 713-717. doi:10.1016/0191-8869(94)90149-X

Gratz KL & Roemer L (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the Difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment, 26*, 41-54. doi: 10.1023/B:JOBA.0000007455.08539.94

Gregório S & Pinto-Gouveia J (in press). Validation study of the Five Facet of Mindfulness Questionnaire in Portuguese population. *Psychologica*.

Hayes S (1994). Content, context, and the types of psychological acceptance. In S Hayes, N Jacobson, V Follette, & M Dougher (Eds.), *Acceptance and change: Content and context in psychotherapy*. Reno, NV: Context Press.

Hayes S, Strosahl K, & Wilson K (1999). *Acceptance and commitment therapy. An experiential approach to behavior change*. New York: Guillford.

Hayes S, Luoma JB, Bond FW, Masuda A, & Lillis J (2006). Acceptance and Commitment Therapy: Model, Process and Outcomes. *Behaviour Research and Therapy, 44*, 1-25. doi:10.1016/j.brat.2005.06.006

Hayes S, Strosahl K, Wilson K, Bissett R, Pistorello J, Toarmino D, Polusny M, Dykstra T, Batten S, Bergan J, Stewart S, Zvolensky M, Eifert G, Bond F, Forsyth J, Karekla M, & McCurry S (2004). Measuring experiential avoidance: A preliminary test of a working model. *The Psychological Record, 54*, 553-578.

Hayes S, Wilson K, Gifford E, Follette V, & Stroshal K (1996). Experiential avoidance and behavioral disorders: A functional dimensional approach to diagnosis and treatment. *Journal of Consulting and Clinical Psychology, 64,* 1152-1168. doi:10.1037//0022-006X.64.6.1152

Hu L & Bentler P (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods, 3*, 424- 453. doi:10.1037//1082-989X.3.4.424

Hubbard R & Allen SJ (1987). An empirical comparison of alternative methods for Principal Component Extraction. *Journal of Business Research, 15*, 173-190. doi:10.1016/0148-2963(84)90047-X

Jöreskog KG (1969). A general approach to confirmatory maximum likelihood factor analysis. *Psychometrika, 34,* 183-202.

Kaiser HF (1970). A second generation little jiffy. *Psychometrika, 35*, 401-415.

Kashdan T, Barrios V, Forsyth J, & Steger M (2006). Experiential avoidance as a generalized psychological vulnerability: Comparisons with coping and emotion regulation strategies. *Behaviour*

*Research and Therapy, 44*, 1301-1320. doi:10.1016/j.brat.2005.10.003

Lovibond P & Lovibond S (1995). The structure of negative emotional states: Comparison of the depression anxiety stress scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy, 33*, 335-343. doi:10.1016/0005-7967(94)00075-U

MacCallum RC, Browne MW, & Sugawara HM (1996). Power analysis and determination of sample size for covariance structure modeling. *Psychological Methods, 1*, 130-149.

Matos M, Pinto-Gouveia J, & Duarte C (2011). *Others as shamers: Portuguese version and psychometric properties of an external shame measure*. Manuscript submitted.

Neff KD (2003). Development and validation of a scale to measure self-compassion. *Self and Identity, 2*, 223-250. doi:10.1080/15298860309027

Nolen-Hoeksema S & Morrow J (1991). Response to depression and their effects on the duration of depressive episodes. *Journal of Abnormal Psychology, 100*, 569-582.

Nunnally J (1978). *Psychometric theory (2nd ed.)*. New York: McGraw-Hill.

Pallant J (2010). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows (4th ed.)*. Open University Press.

Pais-Ribeiro J, Honrado A, & Leal I (2004). Contribution to the adaptation study of the Portuguese adaptation of the Lovibond and Lovibond Depression Anxiety and Stress Scales (EADS) with 21 items. *Psicologia, Saúde & Doenças, 5*, 229-239.

Pinto-Gouveia J & Albuquerque P (2011). *Validation of the Portuguese version of the White Bear Suppresion Inventory (WBSI)*. Unpublished manuscript. University of Coimbra.

Reise SP, Morizot J, & Hays RD (2007). The role of the bifactor model in resolving dimensionality issues in health outcomes measures. *Quality of Life Research, 16*, 19-31. doi:10.1007/s11136-007-9183-7

Ruiz FJ (2010). A review of Acceptance and Commitment Therapy (ACT) Empirical Evidence: Correlational, experimental psychopathology, component and outcome studies. *International Journal of Psychology and Psychological Therapy, 10*, 125-162.

Steiger J (1989). *Causal modeling: A supplementary module for SYSTAT and SIGHRAPH*. Evanston, IL: SYSTAT.

Tabachnick BG & Fidell LS (2007). *Using Multivariate Statistics (5th ed.)*. Boston, MA: Pearson Education

Treynor W, Gonzalez R, & Nolen-Hoeksema S (2003). Rumination Reconsidered: A Psychometris Analysis. *Cognitive Therapy and Research. 27*, 247-259. doi:10.1023/A:1023910315561

Veloso M, Pinto-Gouveia J, & Dinis A (2010). Validation studies with a Portuguese version of the Difficulties in Emotion Regulation Scale. Manuscript submitted for publication.

Watson D, Clark LA, & Tellegen A (1988). Development and validation of brief measures of Positive and Negative Affect: The PANAS scales. *Journal of Personality and Social Psychology, 54*, 1063-1070. doi:10.1037//0022-3514.54.6.1063

Wegner DM & Zanakos S (1994). Chronic thought suppression. *Journal of Personality, 62*, 615-640. doi:10.1111/j.1467-6494.1994.tb00311.x

Wheaton B, Muthen B, Alwin D, & Summers G (1977). Assessing Reliability and Stability in Panel Models. *Sociological Methodology, 8*, 84-136. doi:10.2307/270754

Zwick WR & Velicer WF (1986). Comparison of five rules for determining the number of components to retain. *Psychological Bulletin, 99*, 432-442. doi:10.1037//0033-2909.99.3.432.

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