Validation of the "Anxious Thoughts Inventory" for use in Brazil[i]

André Luiz Moreno[I]

William Barbosa Gomes[II]

Luciana Karine De Souza[III]

Gustavo Gauer[IV]

Validation of the "Anxious Thoughts Inventory" for use in Brazil

ABSTRACT

Worry is a cognitive process in the form of intrusive, repetitive negative thoughts referring to a future event. We adapted and validated the Anxious Thoughts Inventory (AnTI) for use in Brazil, and tested its correlations to the Beck Anxiety Inventory (BAI), the Beck Depression Inventory (BDI), the Penn State Worry Questionnaire (PSWQ), and the Rumination and Reflection Questionnaire (RRQ). 276 Brazilian undergraduates answered all measures. Factor analysis evinced three domains: environmental, own-body and meta-cognitive. Good internal consistency (.86) was detected and positive correlations were found with all measures. The Brazilian version of the AnTI (*Inventário de Pensamentos Ansiosos* – IPAn) is presented as a valid and reliable measure for use with Brazilian samples, useful in clinical and experimental applications. Further studies are encouraged in order to strengthen the validation process as well as provide useful data on anxious thoughts related to other health variables.

Keywords: Worry; Anxiety; Assessment; Cross-cultural adaptation; Intrusive thoughts.

Validação do "Anxious Thoughts Inventory" para o uso no Brasil

RESUMO

A preocupação é um processo cognitivo na forma de pensamentos intrusivos, negativos e repetitivos referentes a um evento futuro. Neste estudo, validou-se o *Anxious Thoughts Inventory* (AnTI) para uso no Brasil e foram testadas suas correlações com: Inventário Beck de Ansiedade, o Inventário Beck de Depressão, *Penn State Worry Questionnaire* e Questionário de Ruminação e Reflexão. 276 universitários responderam às medidas. A análise fatorial evidenciou três domínios: ambiental, corporal e meta-cognitivo. Os resultados apontam boa consistência interna da versão adaptada (0,86) e correlações

positivas com todas medidas avaliadas. A versão brasileira do AnTI (Inventário de Pensamentos Ansiosos - IPAN) é apresentada como uma medida válida e confiável para uso com amostras brasileiras, útil em aplicações clínicas e experimentais. Mais estudos são incentivados a fim de fortalecer o processo de validação, bem como fornecer dados úteis sobre pensamentos ansiosos relacionados a outras variáveis de saúde.

Palavras-chave: Preocupação; Ansiedade; Avaliação psicológica; Adaptação transcultural; Pensamentos instrusivos.

Validación del "Anxious Thoughts Inventory" para su uso en Brasil

RESUMEN

La preocupación es un proceso cognitivo en forma de pensamientos intrusivos negativos y repetitivos que se refieren a un evento futuro. Hemos adaptado el *Anxious Thoughts Inventory* (AnTI) para su uso en Brasil y probamos sus correlaciones con: Inventario de Ansiedad de Beck (BAI), Inventario de Depresión de Beck (BDI), Cuestionario de Preocupación Penn State (PSWQ) y Cuestionario de Reflexión y Rumiación (QRR). 276 estudiantes brasileños respondieron las medidas. El análisis factorial reveló tres dominios: corporal, ambiental y meta-cognitivo. Se detectó una buena consistencia interna de la versión adaptada (0,86) y se encontraron correlaciones positivas con todas las medidas evaluadas. La versión brasileña de AnTI (*Inventário de Pensamentos Ansiosos* - IPAn) se presenta como una medida válida para uso con muestras brasileñas, útil en aplicaciones clínicas y experimentales. Se alienta a más estudios para fortalecer el proceso de validación, así como proporcionar datos útiles sobre los pensamientos de ansiedad relacionados con otras variables de salud.

Palabras clave: Preocupación; Ansiedad; Evaluación; Adaptación cultural; Pensamientos intrusivos.

Worry is a cognitive pattern characterized by negative, intrusive, and repetitive thoughts about a future event (Becker, Rinck, Roth, & Margraf, 1998; Borkovec, Robinson, Pruzinsky, & DePree, 1983). Typical worry-related thoughts are verbal in form, and refer to a future event of uncertain outcome that is perceived as threatening (Beck & Clark, 1997; Freeston, Dugas, & Ladouceur, 1996; Leigh & Hirsch, 2011; Provencher, Freeston, Dugas, & Ladouceur, 2000; Stokes & Hirsch, 2010). The character of worry and its implications make it a crucial cognitive component of anxiety (Clark & Beck, 2012; Eysenck & Calvo, 1992; Wells & Carter, 1999, 2001). In the scope of psychiatric disorders, pathological worry is currently regarded as a main feature in the etiology and maintenance of Generalized Anxiety Disorder [GAD] (American Psychiatric Association, 2002). Subsequent editions of the Diagnostic and Statistical Manual of Mental Disorders [DSM] show an increasing recognition of the role of worry in GAD (Kendler, 2010), and some authors have suggested its substitution for a Generalized Worry Disorder diagnose (Andrews et al., 2010). Moreover, worry has shown to be highly correlated with other anxiety disorders, such as Social Phobia, Obsessive-Compulsive Disorder, and affective disorders like Depression (Hoye, Herzberg, & Gloster, 2009; Muris, Roelofs, Rassin, Franken, & Mayer, 2005; Roemer, Orsillo, & Barlow, 2002; Wells & Carter, 2001).

Developing measures to assess worry, although justified and potentially useful in a range of clinical contexts, is a complex endeavor. Many constructs such as control of intrusive thoughts, thought suppression, and meta-cognition are frequently associated to worry and often considered to be indirectly assessing it (Cartwright-Hatton & Wells, 1997; Wegner & Zanakos, 1994; Wells & Davies, 1994). Nevertheless, the specificity of worry as a thought pattern suggests the necessity of specific measures. The Penn State Worry Questionnaire (Meyer, Miller, Metzger, & Borkovec, 1990) is a known measure of the frequency of worry thoughts. However useful as a measure, it does not assess the specific contents of worry thoughts a subject might experience. Evaluation of such contents not only allows for thorough diagnostics, but it might enable a clearer understanding of the role of worry in anxiety disorders, especially GAD, and assessing cognitive vulnerabilities to anxiety disorders (Khawaja, McMahon, & Strodl, 2011; Olatunji, Wolitzky-Taylor, Sawchuk, & Ciesielski, 2010).

A recent review of anxiety-related measures available in Brazil showed that, despite the key role worry plays in anxiety disorders, at present, the PSWQ is the only instrument adapted and validated for use with the Brazilian population (DeSousa, Moreno, Manfro, Gauer, & Koller, 2013). Castillo, Macrini, Cheniaux and Landeira-Fernandez (2010) reached good psychometric standards on their adapted version, although, as mentioned, the PSWQ only measures worry frequency.

The Anxious Thoughts Inventory (AnTI) (Wells, 1994) specifically evaluates the contents of worry thoughts. It was developed following structured interviews with patients experiencing anxiety. Its good psychometric properties (e.g.: stability, realibility and subscale intercorrelations) have supported the use of AnTI in studies with clinical (Khawaja et al., 2011; Khawaja & McMahon, 2011) as well as general public populations (Bruin, Muris, & Rassin, 2007; Bruin, Rassin, & Muris, 2007).

The research on the content of worry is important to improve the understanding of the role of worry in anxiety disorders, predominantly generalized anxiety disorder (Khawaja, McMahon, & Strodl, 2011; Olatunji et al., 2010). This occurs either by improving the predictive power of association between variables or enhancing the descriptive power of the models of cognitive disorders (Wells & Carter, 1999, 2001). Moreover, assessing contents of worry allows access to cognitive vulnerabilities in anxiety disorders, anticipating the establishment of these disorders and contributing to their prevention.

The present study aimed at adapting and validating the Anxious Thoughts Inventory for use in Brazil. Evidence for construct validity, convergent and concurrent validity was sought through correlations with the Beck Anxiety Inventory (BAI), the Beck Depression Inventory (BDI), the Penn State Worry Questionnaire (PSWQ), and the Rumination and Reflection Questionnaire (RRQ).

Method

Participants
The sample had 276 college students (174 women) from public universities located in Porto Alegre, RS, Brazil. Mean age was 22.8 years (*SD* = 6.8), and 14.0 was the mean schooling years on this sample (*SD* = 3.5).

Instruments
Anxious Thoughts Inventory (AnTI) (Wells, 1994). The AnTI comprises 22 items were distributed in three factors: social worry, physical health worry, and meta-worry. Each item presents subjects with a four-point *Likert* scale, and the total score is obtained by summing up the points. Examples are: "Unpleasant thoughts enter my mind against my will" and "I worry about making a fool of myself". The original ver-

sion presented good reliability scores (.84 for social worry; .81 for physical health; .75 for meta-worry) and test-retest stability (r_s =.80) within a six-week interval. AnTI also presented high correlations with neuroticism (r_s = .73) and anxiety-state (.73). The measure was sensible to differences between clinical and non-clinical groups, and showed to be a clinical index of panic disorder (Wells, 1994).

Penn State Worry Questionnaire (PSWQ) (Meyer et al., 1990) – Brazilian Version (Castillo et al., 2010). It is a 16-item measure that taps frequency of worry, with one factor depicting worry thoughts and a second factor tapping their absence. Internal consistency was .84. In the Brazilian version, the moderate coefficients correlations between the two factors, the good correlations between the total score of scale associated with a moderate correlations between the total score and another anxiety measure (State-Trait Anxiety Inventory) indicate that PSWQ measures a unique construct meaningful to the evaluation of worry.

Beck Anxiety Inventory (BAI) (Beck & Steer, 1993a) – Brazilian Version (Cunha, 2001). The 21-item self-report measure assesses the intensity of anxiety symptoms, using a four-point *Likert* scale. Internal consistency was .87 and test-retest correlations was .91 for normal samples. In the validation study, BAI presented good positive correlation (.76) with another anxiety measure (State-Trait Anxiety Inventory).

Beck Depression Inventory (BDI) (Beck & Steer, 1993b) – Brazilian Version (Cunha, 2001). A 21-item self-report instrument evaluates the intensity of depression symptoms, using a four-point *Likert* scale. Internal consistency was.82 and test-retest correlation was .91 for normal samples. In the validation study, BDI presented moderate positive correlation (.62) with another depression measure (Hamilton Depression Scale).

Reflection and Rumination Questionnaire (QRR) (Trapnell & Campbell, 1999) – Brazilian Version (Zanon & Teixeira, 2006). It assesses private self-consciousness through 24 items divided into a reflection factor (creative self-exploring moved by self-knowledge) and a rumination factor (a tendency to focus attention in threatening or unpleasing aspects of the self). Internal consistency was.87. The Brazilian version presented moderate negative correlation with self-esteem and moderate positive correlation with neuroticism.

Procedures
Participants signed an informed consent form, approved by local Ethics Comitee (protocol 16431) and responded to the measures in class. In order to control for order effects, instruments were administered in two different orders: AnTI, PSWQ, BAI, BDI, and QRR for half the sample; and PSWQ, AnTI, BAI, BDI, and QRR for the other half. Total administration time lasted an average of 30 minutes. All statistical analyses were conducted considering a significance level of .01.

Results

Development of the Brazilian-Portuguese Version of the AnTI
The first and last author translated the measure separately. Both evaluated the translations and agreed upon a single version, which was in turn back-translated into English by a cognitive psychology/psychological assessment expert. The back-translated version was sent to the author of the original instrument, who attested the semantic equivalence between versions. The approved version was administered to 12 undergraduates (aiming a degree in Psychology), followed by a focus group discussion that confirmed the plain understanding of the items in Brazilian-Portuguese. Hence the Inventário de Pensamentos Ansiosos (IPAn) was considered ready for data collection.

Descriptive statistics and internal consistency analyses. The mean of the total score of IPAn was 45.01 (*SD* = 9.46), ranging from 26 to 77 points. IPAn's median score was 44, with the first quartile ending at 38 points and the third at 52. No significant differences were detected between men and women mean scores. Internal consistency analysis was .86.

Factor analyses. Principal components analysis with direct Oblimin rotation and a forced three-factor solution was carried out, taking a minimum factor load of .30 as criterion for item analysis. The three-factor model explained 44.5% of the variance, a result equivalent to the one found in the original English version. A scree plot test was also conducted and enabled a clear visualization of the three main factors. Internal consistency was .84 for the physical health factor, .68 for the social factor, and .74 for the meta-worry factor. Table 1 presents factor loadings per item and their distribution throughout the three factors.

Table 1: Factor loadings for Principal Components Analysis With Oblimin Rotation of Anxiety Thoughts According to IPAn

	Factor		
Item	**Social Worry**	**Physical Health Worry**	**Meta-Worry**
20	**.886**	-.111	.071
8	**.743**	-.045	-.018
9	**.716**	-.095	-.052
12	**.701**	-.075	.044
14	**.645**	-.155	-.043
18	**.532**	.146	-.188
17	**.529**	.117	-.270
1	**.493**	.146	.196
2	**.472**	.049	-.207
3	**.410**	.133	-.016
5	-.002	**.793**	.042
7	-.056	**.762**	.023
4	.039	**.714**	.028
15	-.012	**.706**	.012
10	-.020	**.345**	.009
19	-.007	**.343**	-.195
6	-.061	.003	**-.849**
11	.054	.000	**-.713**
22	-.028	-.052	**-.654**
16	.157	.226	**-.501**
13	**.412**	-.014	**-.428**
21	.264	.223	-.279

Note. Factor loadings > .30 are in boldface.

Overall the item distribution was similar to the one found in the original version of the scale, except for item 3. Table 1 shows that the item ("*Quando olho para o meu futuro, penso mais sobre coisas negativas que podem me acontecer do que coisas positivas*") loaded on a different factor compared to what was expected. Item 13 ("*Eu levo as decepções tão a sério que não consigo tirá-las da minha cabeça*") loaded on two factors (1 and 3), showing the same tendency as observed in the factor analyses conducted for the English original version. Item 21 also loaded on factors 1 and 3, but below .30. Item-total corrected correlations ranged from .09 to .73. Table 2 shows inter-factor correlations.

Table 2: Spearman Correlations between IPAn Total Score and its factors

	Physical Health Worry Factor	**Social Worry Factor**	**Meta-Worry Factor**
IPAn Total	**.873**	**.509**	**.809**
Meta-Worry Factor	**.555**	.298	
Social Worry Factor	.198		

According to Table 2, moderate to high correlations were depicted, except for the social worry factor. This factor did not significantly correlate with the others.

IPAn correlations with PSWQ, BDI, BAI, and QRR
The sample used for this study obtained the following mean scores for the aforementioned measures: 50.7 for the PSWQ (*SD* = 10.60); 9.1 for the BAI (*SD* = 6.91); 7.9 for the BDI (*SD* = 5.83); and 49.1 for the QRR (*SD* = 6.76). Table 3 presents the correlations between the IPAn and the depression, anxiety, worry, and reflection/rumination measures. All correlations were higher than .511 and considered statistically significant (p < .01).

Table 3: Spearman Correlations between IPAn Total, PSWQ, BDI, BAI, and QRR

	QRR	**BDI**	**BAI**	**PSWQ**
IPAn Total	.515	.565	.511	.633
PSWQ	.379	.427	.445	
BAI	.334	.580		
BDI	.376			

The measures of depression, anxiety, worry and reflection/rumination were also correlated with the IPAn factors separately, as shown in Table 4. No correlations were found between the social worry factor and the measures.

Table 4: Spearman Correlations between IPAn Factors, PSWQ, BDI, BAI, and QRR

	QRR	**BDI**	**BAI**	**PSWQ**
Meta-Worry	.507	.525	.457	.606
Social Worry	.091	.206	.252	.270
Physical Health Worry	.489	.478	.435	.526

Discussion

This study aimed at adapting and validating the AnTI for use in Brazil, here on referred to as the *Inventário de Pensamentos Ansiosos* (IPAn). All internal consistency analyses conducted evinced good indexes, similar to the original scale (Wells, 1994). Factor structure was nearly equivalent to the original, except for item 3 that migrated from the meta-worry factor to the social worry factor. The factor structure equivalence between the original and the Brazilian version favors the understanding that there might be a common and persistent pattern of thought content throughout the cultures involved. IPAn presented moderate correlations with frequency of worry, depression symptoms, private self-consciousness, and anxiety symptoms, particularly of physiological nature.

The original factors in the AnTI were named social worry, physical health worry, and meta-worry. Despite the adequate adaptation of the items for use with Brazilian samples carried out in this study, the nomenclature adopted for the factors do not seem to meet most of the items in the Brazilian version. The items do not directly refer to social situations or health problems. Furthermore, understanding these factors in domains of worry is more suitable when discussing contents of

worry, given that the three factors share the negative repetitive process of worry but differ in the expression of this process. In this sense, it would seem more appropriate to rename the social worry factor into a more suitable other-related name that better reflects the sort of worry expressed through the items, such as "environmental domain", as for the health worry factor, a more self-related name would probably fit better, such as "own-body domain". The main feature of the meta-worry factor, the meta-cognitive process, should be maintained, only adapting its name for a more suitable understanding of worry in domains: "meta-cognitive domain".

IPAn presented adequate correlations with the measures PSWQ, BDI, BAI, and QRR. Concurrent validity was established as a strong correlation was found between IPAn and PSWQ, suggesting an intrinsic relationship concerning frequency of worry in both measures, regardless of the content of the thoughts.

The concomitant availability of the PSWQ-Brazilian Version (Castillo et al., 2010) and the IPAn (this study), with good psychometric properties, supports the understanding that both instruments should be simultaneously used in the anxiety diagnosis process in which worry pertains to the etiology under study. Frequency and content of worry thoughts may also be assessed in the effectiveness evaluation of psychotherapy strategies. Taken together they work as indicators of the client's worry pattern and its performance throughout treatment.

The moderate correlation between the IPAn and the BAI may be due to the fact that they tap different aspects of anxiety. Thus while IPAn measures worry – one aspect of the cognitive process that might initiate and sustain anxiety states –, BAI measures mainly physiological symptoms linked to anxiety. Therefore the multifaceted nature of the anxiety construct is illustrated by its ability to being crucial to certain anxiety disorder diagnosis (such as GAD) as well as not that decisive for other disorders, like social phobia.

High levels of comorbidity between anxiety disorders and depressive symptoms (Kendler, 2010) could explain the moderate correlation involving the IPAn and the BDI scores. Consequently a more precise assessment of negative repetitive thoughts allows a better differential diagnosis when dealing with anxiety and depressive disorder indicators. Consistent with this, IPAn should not be used as unique measure to indicate differences between repetitive thoughts of depression and anxiety, since that it seems that anxiety thoughts might also exist in depression. However, this idea has to be supported in others contexts.

The moderate correlation observed between the IPAn and the QRR suggests that self-consciousness is crucial to perceiving worry as pathological. Moreover, the QRR factor that entails noticing threatening elements to ones self favors the definition of worry sustained on this study. However, it is possible that the worry construct is mostly determined by the negative repetitive pattern in comparison to the past- or future-directedness feature of the processed representation. In other words, rumination of past events and worry about future episodes may give rise to a dimension more representative of specific individual differences, with a refinement of the general pattern of the tendency of intrusion by repetitive negative thoughts. Specific measures that depict the content of rumination, similar to how IPAn assesses worry, may corroborate this idea.

Generally, IPAn presents at least moderate correlations with others instruments that are current used in the screening and diagnose of mental disorders. This particular fact could indicate that anxious thoughts should be more investigated as an important variable in mental disorders. Furthermore, the absence of good measures of repetitive thoughts in Brazil exposes that this variable has not been included in

assessment protocols. In this sense, IPAn presents itself as an alternative to this scenario, especially when considered the "meta-worry" and the "own-body domain".

Concluding remarks

Further studies are needed to widen the understanding of anxious thoughts and the identification of opportunities for evaluation through IPAn. Studies that explore worry in relation to other disorders are relevant for allowing the realization of how important the assessment of its contents is to diagnosis in psychiatric disorders. Studies conducted with larger samples and other clinical samples will also be crucial to find data that corroborates the results herein reported, not only for generalization purposes but for more detailed information on the limits and strengths of the IPAn as well.

This study indicates that IPAn is a good alternative in evaluating worry with Brazilian samples, meeting the original psychometric qualities and factor structure. It is, also, a brief self-administered measure of agile scoring.

Taking into consideration how substantial worry is as a variable present in the psychopathology of anxiety disorders, a more available measure to assess worry contents within the Brazilian cultural context may contribute to advances in clinical psychology. In order to illustrate this, the IPAn has the potential to foster studies on the effectiveness/efficacy of cognitive therapy when treating worry. This is so much the case as cognitive therapy is considered very efficient in treating worry according to international studies (Hanrahan, Field, Jones, & Davey, 2013).

Worry contents are also relevant to studies on performance in the realm of information processing when worry is considered a variable of individual difference. Clearer descriptions of the effects of anxiety on normal cognitive processing may also be reached with the inclusion of worry as a variable in cognitive experimentation. After all, worry is the most important cognitive content in anxiety. Studies on how worry interferes with working memory, with attentional processes, and with behavioral inhibition seem interesting experimental paths to embrace.

References

Andrews, G., Hobbs, M. J., Borkovec, T. D., Beesdo, K., Craske, M. G., Heimberg, R. G., Rapee, R. M., Ruscio, A. M., & Stanley, M. A. (2010). Generalized worry disorder: a review of DSM-IV generalized anxiety disorder and options for DSM-V. *Depression and Anxiety*, 27(2), 134-147.

American Psychiatric Association (APA). (2002). *Manual Diagnóstico e Estatístico de Transtornos Mentais - TR* [Diagnostic and Statistical Manual of Mental Disorders - DSM-IV-TR]. Porto Alegre: Artmed.

Beck, A. T., & Steer, R. A. (1993a). *Beck Anxiety Inventory Manual*. San Antonio: Psychological Corporation.

Beck, A. T., & Steer, R. A. (1993b). *Beck Depression Inventory Manual*. San Antonio: Psychological Corporation.

Beck, A. T., & Clark, D. A. (1997). An information processing model of anxiety: Automatic and strategic processes. *Behaviour Research and Therapy*, 35, 49-58. doi:10.1016/s0005-7967(96)00069-1

Becker, E. S., Rinck, M., Roth, W. T., & Margraf, J. (1998). Don't worry and beware of white bears: Thought suppression in anxiety patients. *Journal of Anxiety Disorders*, 12, 39-55. doi:10.1016/s0887-6185(97)00048-0

Borkovec, T. D., Robinson, E., Pruzinsky, T., & DePree, J. A. (1983). Preliminary exploration of worry: Some characteristics and processes. *Behaviour, Research and Therapy*, 21, 9-16. doi:10.1016/0005-7967(83)90121-3

Bruin, G. O. de, Muris, P., & Rassin, E. G. C. (2007). Are there specific meta-cognitions associated with vulnerability to symptoms of worry and obsessional thoughts? *Personality and Individual Differences*, 42(4), 689-699.

Bruin, G. O. de, Rassin, E. G. C., & Muris, P. (2007). The prediction of worry in non-clinical individuals: The role of intolerance of uncertainty, meta-worry, and neuroticism. *Journal of Psychopathology and Behavioral Assessment*, 29, 93-100.

Cartwright-Hatton, S., & Wells, A. (1997). Beliefs about worry and intrusions: The Meta-Cognitions Questionnaire and its correlates. *Journal of Anxiety Disorders*, 11(3), 279-296.

Castillo, C., Macrini, L., Cheniaux, E., & Landeira-Fernandez, J. (2010). Psychometric properties and latent structure of the Portuguese version of the Penn State Worry Questionnaire. *The Spanish Journal of Psychology*, 13(1), 431-443.

Clark, D. A., & Beck, A. T. (2012). O modelo cognitivo da ansiedade. In D. A. Clark & A. T. Beck (Orgs.), *Terapia cognitiva para os transtornos de ansiedade* (pp. 42-66). Porto Alegre: Artmed.

Cunha, J. (2001). *Manual em português das Escalas Beck* [Portuguese manual of the Beck Scales]. São Paulo: Casa do Psicólogo.

DeSousa, D. A., Moreno, A. L., Manfro, G., Gauer, G., & Koller, S. H. (2013). Revisão Sistemática de Instrumentos para Avaliação de Ansiedade na População Brasileira [Systematic review of measures to assess anxiety in Brazilian population]. *Avaliação Psicológica*, 12(3), 397-410.

Eysenck, M. W., & Calvo, M. G. (1992). Anxiety and performance: The processing efficiency theory. *Cognition & Emotion*, 6, 409-434. doi:10.1080/02699939208409696

Freeston, M., Dugas, M., & Ladouceur, R. (1996). Thoughts, images, worry, and anxiety. *Cognitive Therapy and Research*, 20, 265-273. doi:10.1007/bf02229237

Hanrahan, F., Field, A. P., Jones, F. W., & Davey, G. C. L. (2013). A meta-analysis of cognitive therapy for worry in generalized anxiety disorder. *Clinical Psychology Review*, 33, 120-132.

Hoye, J., Herzberg, P. Y., & Gloster, A. T. (2009). Is worry different from rumination? Yes, it is more predictive of psychopathology! *Psychosocial Medicine*, 6, 1-9*.*

Kendler, K. S. (2010). The problem: Charge to the conference. In D. P. Goldberg, K. S. Kendler, P. J. Sirovatka, & D. A. Regier (Orgs.), *Diagnostic issues in depression*

and generalized anxiety disorder: Refining the research agenda for DSM-V (pp. 1-15). Arlinton: American Psychiatric Publishing.

Khawaja, N. G., & McMahon, J. (2011). The relationship of meta-worry and intolerance of uncertainty with pathological worry, anxiety, and depression. *Behaviour Change*, 28, 165-180. doi:10.1375/bech.28.4.165

Khawaja, N. G., McMahon, J., & Strodl, E. (2011). Intolerance of uncertainty and meta-worry: Relative importance in discriminating GAD. *Behaviour Change*, 28, 181-194.

Leigh, E., & Hirsch, C. R. (2011). Worry in imagery and verbal form: Effect on residual working memory capacity. *Behaviour Research and Therapy*, 49, 99-105. doi:10.1016/j.brat.2010.11.005

Meyer, T. J., Miller, M. L., Metzger, R. L., & Borkovec, T. D. (1990). Development and validation of the Penn State Worry Questionnaire. *Behaviour Research and Therapy*, 28, 487-495. doi:10.1016/0005-7967(90)90135-6

Muris, P., Roelofs, J., Rassin, E., Franken, I., & Mayer, B. (2005). Mediating effects of rumination and worry on the links between neuroticism, anxiety and depression. *Personality and Individual Differences*, 39, 1105-1111. doi:10.1016/j.paid.2005.04.005

Olatunji, B. O., Wolitzky-Taylor, K. B., Sawchuk, C. N., & Ciesielski, B. G. (2010). Worry and the anxiety disorders: A meta-analytic synthesis of specificity to GAD. *Applied and Preventive Psychology*, 14, 1-24.

Provencher, M. D., Freeston, M. H., Dugas, M. J., & Ladouceur, R. (2000). Catastrophizing assessment of worry and threat schemata among worriers. *Behavioural and Cognitive Psychotherapy*, 28, 211-224.

Roemer, L., Orsillo, S. M., & Barlow, D. H. (2002). Generalized anxiety disorder. In D. H. Barlow (Org.), *Anxiety and its disorders: The nature and treatment of anxiety and panic* (pp. 477-515). New York: Guilford Press.

Stokes, C., & Hirsch, C. R. (2010). Engaging in imagery versus verbal processing of worry: Impact on negative intrusions in high worriers. *Behaviour Research and Therapy*, 48, 418-423. doi:10.1016/j.brat.2009.12.011

Trapnell, P. D., & Campbell, J. D. (1999). Private self-consciousness and the five-factor model of personality: Distinguishing rumination from reflection. *Journal of Personality and Social Psychology*, 76(2), 284-304.

Wegner, D. M., & Zanakos, S. (1994). Chronic thought suppression. *Journal of Personality*, 62, 615-640.

Wells, A. (1994). A multi-dimensional measure of worry: Development and preliminary validation of the anxious thoughts inventory. *Anxiety, Stress & Coping*, 6, 289-299. doi:10.1080/10615809408248803

Wells, A., & Carter, K. (1999). Preliminary tests of a cognitive model of generalized anxiety disorder. *Behaviour Research and Therapy*, 37, 585-594. doi:10.1016/s0005-7967(98)00156-9

Wells, A., & Carter, K. (2001). Further tests of a cognitive model of generalized anxiety disorder: Metacognitions and worry in GAD, panic disorder, social phobia, depression, and nonpatients. *Behavior Therapy*, 32, 85-102. doi:10.1016/s0005-7894(01)80045-9

Wells, A., & Davies, M. I. (1994). The Thought Control Questionnaire: A measure of individual differences in the control of unwanted thoughts. *Behaviour Research and Therapy*, 32, 871-878. doi:10.1016/0005-7967(94)90168-6

Zanon, C., & Teixeira, M. A. P. (2006). Adaptação do Questionário de Ruminação e Reflexão (QRR) para estudantes universitários brasileiros [Adaptation of the Rumination and Reflection Questionnaire (QRR) for use with Brazilian college students]. *Interação em Psicologia*, 10, 75-82.

Endereços para correspondência

André Luiz Moreno
moreno.andreluiz@gmail.com

William Barbosa Gomes
wbgomes@gmail.com

Luciana Karine De Souza
lukarides@gmail.com

Gustavo Gauer
gusgau@gmail.com

I. Doutorando. Programa de Pós-Graduação em Saúde Mental. Universidade de São Paulo (USP). Ribeirão Preto. Estado de São Paulo. Brasil.

II. Docente. Programa de Pós-Graduação em Psicologia. Universidade Federal do Rio Grande do Sul (UFRGS). Porto Alegre. Estado do Rio Grande do Sul. Brasil.

III. Pós-Doutoranda (PNPD CAPES). Programa de Pós-Graduação em Psicologia. Universidade Federal do Rio Grande do Sul. Porto Alegre. Estado do Rio Grande do Sul. Brasil.

IV. Docente. Programa de Pós-Graduação em Psicologia. Universidade Federal do Rio Grande do Sul (UFRGS). Porto Alegre. Estado do Rio Grande do Sul. Brasil.