Validation of the White Bear Suppression Inventory for the Mexican population

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Abstract

Thought suppression is the general tendency to suppress unwanted, negative thoughts and the inability to ignore unwanted intrusive thoughts. The purpose of this study was to develop a translated version of the White Bear Suppression Inventory (WBSI) that is reliable and valid in a Mexican sample. A back-to-back translation of the WBSI was made, and the WBSI- Mexican Version (WBSI-MV) was administered to a sample of 346 undergraduate students enrolled at university in northern Mexico. Support was found for a two-factor solution, with factors labeled intrusion and suppression, which is consistent with previous research. Furthermore, support was found for the validity of the WBSI-MV, as both subscales were considered to be significantly and positively associated with measures of obsessive-compulsive disorder symptoms and thought-action fusion. Overall, the WBSI-MV proved to be a valid measure that can be used to assess suppressive and intrusive thoughts in the Mexican population.

Keywords: thought suppression, White Bear Suppression Inventory, intrusive thoughts, obsessive-compulsive disorder, Mexican population

Resumen

El Inventario de Supresión del Oso Blanco (WBSI) se encuentra entre los instrumentos de autoinforme más utilizados para evaluar la supresión del pensamiento, la tendencia general a suprimir los pensamientos negativos no deseados y la incapacidad de ignorarlos. El propósito del presente estudio fue desarrollar una versión traducida del WBSI que sea confiable y válida en una muestra mexicana. Se realizó una traducción y se administró a 346 estudiantes universitarios en el norte de México. Los resultados mostraron una solución de dos factores, etiquetados como intrusión y supresión, lo cual es consistente con investigaciones previas. Además, se apoyó la validez de la versión mexicana (WBSI-MV), ya que ambas subescalas estaban asociadas de manera significativa y positiva con medidas de síntomas de trastorno obsesivo compulsivo y fusión de pensamiento-acción. En general, se mostró que el WBSI-MV es un instrumento válido que puede utilizarse para evaluar los pensamientos supresivos e intrusivos en la población mexicana.

Palabras clave: supresión del pensamiento, Inventario de Supresión del Oso Blanco, población mexicana, pensamientos intrusivos, trastorno obsesivo compulsivo

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Introduction

Thought suppression involves keeping thoughts out of the mind or consciousness (Wegner & Zanakos, 1994). Interestingly, thought suppression may have an ironic or paradoxical effect, as attempts to suppress thoughts may actually increase the occurrence of these thoughts (Pica et al., 2015; Wegner & Zanakos, 1994). In particular, the paradoxical effect is hypothesized to be caused by deeper activation of the suppressed thoughts, which makes them more accessible (Harsányi et al., 2014; Stewart et al., 2015). In addition, failed attempts at thought suppression may lead to an increase in negative cognitions and emotions (Bjarnason et al., 2014). Based on these paradoxical effects, thought suppression may be particularly problematic for individuals who attempt to suppress intrusive and unwanted thoughts (Ashton & Boschen, 2011; Koster et al., 2008). Relevant to this point, it appears that thought suppression may be a factor in the development or maintenance of obsessive-compulsive disorder and other mental health disorders including depression, post-traumatic stress and generalized anxiety (Purdon, 1999).

The White Bear Suppression Inventory (WBSI) is perhaps the most widely used instrument to assess the tendency to engage in thought suppression (Wegner & Zanakos, 1994). More specifically, the WBSI is a self-report measure that evaluates a general tendency to suppress unwanted negative thoughts and an inability to ignore unwanted thoughts (Belloch et al., 2009; Jiménez et al., 2015; Schmidt et al., 2009; Wegner & Zankos, 1994). Furthermore, this measure has been found to be positively and significantly associated with symptoms of OCD, depression, and anxiety (e.g., Wegner & Zankos, 1994).

In addition to the original English version of the WBSI, also validated in the United States, the measure has been translated to numerous languages (Schmidt et al., 2009). More specifically, the WBSI has been validated in at least seven additional languages, such as Portuguese, Dutch, English, German, French, Spanish and Turkish. And consistent cross-cultural support has been found for the association between the WBSI and symptoms of OCD, depression and anxiety (Altın & Gençöz, 2009; Jiménez et al., 2015; Muris et al., 1996; Vincken et al., 2012). Despite the fact that the WBSI has been found to be associated with measures of psychopathology, discrepancies in the factor structure have been noted (Schmidt et al., 2009).

Whereas the results of some studies have yielded a single-factor solution such as the original version (Wegner & Zankos, 1994), a number of other studies have arrived at a two-factor solution. Typically, these studies can find a factor that measures the tendency to experience intrusions and a factor that measures the tendency to engage in thought suppression.

Two Spanish versions of the WBSI have been developed and validated. In Spain, the first published study was conducted by Rodríguez et al. (2008) which used the translated version based on the dialect spoken in Spain (European Spanish). The authors explored the structural validity and reliability of the European Spanish version of the WBSI in two community samples from Spain. Reliability and validity were found to be good, and the authors obtained a two-factor solution. These factors were consistent with previous research in which factors that were consistent with intrusion and suppression were obtained.

A Cuban version of the WBSI was developed to reflect the Spanish dialect spoken in Cuba (Cuban Spanish). In the first study, Rodríguez-Martín (2010) examined the latent factor structure and reliability of the Cuban version of the WBSI in a sample of older Cubans. The author found support for
a two-factor solution and acceptable reliability. In a follow-up study, Rodríguez-Martín et al. (2014) examined the validity and psychometric properties of the Cuban version of the WBSI community sample. Consistent with previous research, the validity of this version of the WBSI was supported, as the measure was found to be significantly associated with symptoms of anxiety and depression. However, in contrast to Rodríguez-Martín (2010), the authors arrived at a single-factor solution.

Although the WBSI has been translated and validated for the European Spanish and Cuban populations, differences in Spanish dialects across countries may warrant the need for a translated version of the WBSI specifically for the Mexican population (Pallanti, 2008; Treviño-de la Garza et al., 2019). Numerous cultural and linguistic differences between Mexico, Spain and Cuba can be observed, and these differences may increase the probability of misinterpreting specific words or phrases. As it is well known, within a culture, a system of meaning is shared among those who speak the same language or dialect in the same geographic location by using specific words, phrases and sentence structures that become apparent in each culture (Morling & Lamoreaux, 2008; Trandis, 2000). Therefore, it is important to take culture into account and validate the measures with participants within the target context or country (Ruvalcaba et al., 2014).

To illustrate this point, we can compare item three of the WBSI European Spanish version that reads Tengo pensamientos que no puedo evitar with the same item in the Cuban version that reads Tengo pensamientos que no puedo parar. Variations are also likely in the translation of the WBSI to Mexican Spanish. Consequently, the need for a specific version of the WBSI for the Mexican population is very important in order to accurately capture the cultural and linguistic nuances of the Spanish language, as it is spoken in Mexico. This could be accomplished with careful back-to-back translation and a careful selection of specific wording and adaptation of phrases.

In response to this need, the purpose of the current study was to develop the WBSI-Mexican Version (WBSI-MV), and to investigate the validity of this measure in a Mexican sample. Based on other cultural validations of this measure (e.g., Rodríguez et al., 2008; Rodríguez-Martín, 2010), it was hypothesized that the WBSI-MV would report a two-factor structure labeled as intrusion and suppression with good psychometric properties.

**Method**

**Participants**

Three hundred and sixty-four students enrolled at university in northern Mexico volunteered to participate in this online survey-based study. Inclusion criteria consisted of participants being 18 years old or older and enrolled in an undergraduate program. Regarding demographic characteristics, the mean age was 20.59 (SD = 1.92), and the sample was 79.4% females and 20% males.

**Design and Procedures**

The study was internet-based, in which participants completed an online survey packet of self-report measures. Before participating in the study, potential participants were required to complete and sign an informed consent form, as part of the informed consent potential participants were reminded that the involvement was voluntary. Participants who agreed to participate were then asked to complete a demographic questionnaire and the Spanish versions of the measures described below. The study was approved by the university's Institutional Review Board.
Measures

**White Bear Suppression Inventory – Mexican Version (WBSI-MV).** The WBSI is among the most commonly utilized measures to assess thought suppression (Wegner & Zanakos, 1994). This self-report measure consists of 15 items with response options on a 5-point Likert scale. The WBSI exhibits good psychometric properties, including excellent internal consistency ($\alpha = .93$), and validity, as the WBSI has been found to be positively and significantly associated with measures of anxiety and depression (Wegner & Zanakos, 1994). For the purpose of the current study, the WBSI was translated from English to Spanish and back-translated from Spanish to English to ensure an accurate translation. Within the translation process, language was adapted and cultural aspects were revised by two professors from the School of Psychology at Mexican university, in order to make the items more accurate and representative. The back-translated version of the measure was evaluated by native English speakers. The internal consistency of the Y-BOCS-SR in Spanish for the current sample was excellent, $\alpha = .93$. In the current study this measure was used to assess concurrent validity, as WBSI has consistently been associated with OCD symptoms. The Y-BOCS-SR was used to explore convergent validity, as OCD symptoms have been associated with thought suppression, therefore a degree of convergence was expected.

**Yale-Brown Obsessive Compulsive Scale Self Report Version (Y-BOCS-SR).** The Symptom Severity Scale of the Y-BOCS-SR was administered in this study (Baer, 1991). The Y-BOCS-SR assesses components of symptom severity including the amount of distress, interference, time spent on obsessions or compulsions, and perceived control of obsessions and compulsions. The Y-BOCS-SR severity scale includes a total of seven items to measure obsessions and seven items to evaluate compulsions. Each question has a Likert scale ranging from 0 to 4 (Ólafsson et al., 2010). For the purpose of this study, this measure was also translated from English to Spanish and back-translated. Within the translation process, language was adapted and cultural aspects were revised by two professors from the School of Psychology at Mexican university, in order to make the items more accurate and representative. The back-translated version of the measure was evaluated by native English speakers. The internal consistency reported was $\alpha =$
The TAFS was used to explore convergent validity, as though suppression and thought-action fusion are similar cognitive variables associated with OCD, and a degree of convergence was expected.

Data Analysis Plan

Confirmatory factor analyses (CFAs) were conducted using Mplus version 8.1 to determine the degree of adjustment of the data obtained in the current sample fits with the previously established models. In particular, the purpose of the first CFA was to examine the degree to which the single-factor model obtained by Rodríguez-Martín et al. (2014) and Wegner & Zankos (1994) fits with the current data. The purpose of the second CFA was to examine the degree to which the two-factor model obtained by Rodríguez et al. (2008) fits with the current data. For both CFAs, a WLSMV estimation method was used. Further, pending poor fit with previously established models, an exploratory factor analysis (EFA), was to be conducted with a principal axis extraction method and a Promax rotation. Items with loadings of .30 or greater on a single factor were to be retained.

Following establishment of the factor structure, an assessment of reliability was planned by examining Cronbach’s alphas, and an examination of the validity of the WBSI-MV was planned by assessing the magnitude of the association between the WBSI-MV and the designated validation measures (i.e., Y-BOCS-SR and TAFS). The SPSS version 26.0 had been used for the EFA and the bivariate correlations. Finally, qualitative analysis was conducted to determine if the translation process produced substantive differences and improved utility, in order to be used in a Mexican sample, in connection with the previously translated Spanish version of the WBSI.

Results

The single-factor model was found to be a poor fit with the data, $\chi^2/df = 9.28$, CFI = .926, TLI = .914, RMSEA = .14. Further, the two-factor model was also found to be a poor fit with the data, $\chi^2/df = 7.36$, CFI = .945, TLI = .92, RMSEA = .12. Next, based on an Exploratory Factor Analysis, support was found for a two-factor model (see Table 1). Congruent with previous research, one factor was consistent with the theme of thought suppression (labeled “Suppression”) and the second was consistent with thought intrusions (labeled “Intrusion”). The Suppression subscale consisted of seven items, and the Intrusion subscale consisted of five items. Two items were dropped due to significant loadings on both factors (See Table 1).

To assess criterion validity, bivariate correlations were conducted to examine association between the subscales of the WBSI-MV and the Y-BOCS-SR. As anticipated, the Suppression subscale, $r (356) = .48$, $p < .001$, and Intrusion subscale, $r (361) = .54$, $p < .001$, were both found to be significantly associated with the Y-BOCS-SR. Convergent validity was assessed by examining the association between the WBSI-MV and the TAFS. As anticipated, the Suppression subscale, $r (356) = .33$, $p < .001$, and Intrusion subscale, $r (361) = .27$, $p < .001$, were both found to be significantly and positively associated with the total score of the TAFS.

Finally, a qualitative analysis was conducted in which the items from the European Spanish version of the WBSI were directly compared to items on the WBSI-MV. Differences between the two versions were observed. For example, the
original wording of item 10 reads as Sometimes I stay busy just to keep thoughts from intruding my mind. The European Spanish version employs the word “head” (cabeza), instead of the direct translation of the word “mind” (mente). In contrast, the WBSI-MV uses “mente”. Another example relates to item 8, which reads I always try to put problems out of mind, the European Spanish uses the word “quitar me” in relation to putting problems out of mind, while the Mexican Spanish uses the word “apartar” which reflects, in a more accurate way, putting problems out of mind rather than eliminating the problem.

In general, WBSI-MV exhibits differences relative to the European Spanish version of the WBSI, and the translation appears to be successful in taking into account the nuances of the Spanish language, as spoken in Mexico.

Table 1
Results From a Factor Analysis of the White Bear Suppression Inventory – Mexican Version (WBSI-MV).

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1 (Suppression)</th>
<th>Factor 2 (Intrusion)</th>
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<tbody>
<tr>
<td>1</td>
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<td>8</td>
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<td>10</td>
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<td>.91</td>
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<td>14</td>
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<td>5</td>
<td></td>
<td>.77</td>
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<tr>
<td>7</td>
<td></td>
<td>.44</td>
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</tbody>
</table>

Note. Values based on an exploratory factor analysis with a principal axis factor extraction method and a Promax factor rotation. Factors loadings .30 or above on a single factor were retained for subsequent analyses. Based on this criteria, items 6 and 9 were dropped, as these items yielded loadings of .3 or greater on both factors.

Discussion

The purpose of the current study was to examine the psychometric properties of the WBSI translated to Mexican Spanish. Consistent with numerous previous studies, support was found for a two-factor solution, with factors labeled Intrusion and Suppression. Further, also consistent with previous research, the WBSI-MV showed good internal consistency, and support was found for the validity of the WBSI-MV, as both factors were found to be positively and significantly associated with OCD symptoms and thought-action fusion.

The variation in factor structure of the WBSI across studies is noteworthy (Schmidt et al., 2009). The two-factor solution obtained in the current study is generally consistent with the results of the European Spanish version of the WBSI by Rodríguez et al. (2008) and seems to be with other factor analytic studies of the WBSI (see Schmidt
et al., 2009)). However, a number of studies have obtained a single-factor solution (e.g., Altin & Gençöz, 2009; Jiménez et al., 2015; Vincken et al., 2012). Consequently, more research is needed to better understand the factor structure of the WBSI. This is especially the case for Spanish-speaking individuals, as there is limited research on thought suppression in this population.

To assure accuracy of the translation, the authors of the current study utilized back-to-back translation, and wording and phrases were carefully selected and adapted to reflect a more common linguistic understanding in Mexico. This approach appears to have led to qualitative differences between these two versions, which reiterates the need and utility of a version of the WBSI specifically developed for the Mexican population. For example, one noteworthy difference relates to item 9 with the word “surgiendo” relative to the phrase vienen una y otra vez. In particular, “surgiendo” is a word that more accurately reflects the meaning of the original statement in the Mexican population.

Another difference is observable with item 3, which reads Tengo pensamientos que no puedo detener, in which in the European Spanish version “evitar” refers to a thought that someone may avoid but it eventually returns, as opposed to the translation in the Mexican version in which “detener” is a direct order to stop the unwanted thought. The differences between the two versions reinforce the importance of having a culturally adapted version of the WBSI (Vincken et al., 2012).

Overall, having the WBSI-MV is useful for researchers and clinicians interested in assessing thought suppression in clinical and community samples in Mexico. For example, the WBSI-MV may assist in the identification of OCD and in treatment planning. Moreover, having a WBSI validated in Mexico may serve as an impetus for more research in this country in the areas of anxiety and OCD symptoms.

Some limitations of the present study should be considered and addressed in future research. One of the limitations is the fact that the sample of this study was of undergraduate college students. Consequently, the findings of the current study may not be generalized to non-college students in the Mexican population. As a result, it will be important for subsequent studies to explore the psychometric properties of the WBSI-MV in individuals of various ages, education and SES levels, and from rural and urban areas. In addition, it will expand our current knowledge to have studies that explore the relationship between thought suppression, measured by the WBSI and variables that are closely related to emotional suppression such as coping skills, through measures such as the Coping Strategies Inventory (Schetsche et al., 2022). Further, due to the fact that data collection was conducted with a non-referred sample, it is crucial to do research with clinical samples to better understand thought suppression in patients diagnosed with OCD or anxiety disorders.

In summary, the current findings indicate that the WBSI-MV is a useful and valid tool to assess thought suppression in the Spanish-speaking population in Mexico. The WBSI-MV may also have the potential to provide insight into the underlying mechanisms that lead to the development of anxiety and OCD in the Mexican population. Although the findings are promising, further research should be conducted to continue disseminating and implementing measures, to acquire an accurate depiction of symptoms in culturally diverse communities in order to provide culturally appropriate and effective interventions.

Conflicts of Interest: None.

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References


Gallegos-Guajardo et al., Evaluar, 2023, 23(2), 57-66

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Appendix A

White Bear Suppression Inventory for Mexican Version (WBSI-MV)
Inventario de Supresión del Pensamiento del Oso Blanco Versión Mexicana

Por favor indica el grado concordancia o discrepancia con los elementos de la siguiente escala:

<table>
<thead>
<tr>
<th>En completo desacuerdo</th>
<th>En desacuerdo</th>
<th>Neutral</th>
<th>De acuerdo</th>
<th>De acuerdo completamente</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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</table>

1. Hay cosas en las que prefiero no pensar.
2. Algunas veces me pregunto por qué tengo los pensamientos que tengo.
3. Tengo pensamientos que no puedo detener.
4. Hay imágenes que vienen a mi mente que no puedo borrar.
5. Mis pensamientos vuelven a una misma idea frecuentemente.
6. Desearía poder dejar de pensar en ciertas cosas.
7. Mi mente se acelera tanto algunas veces que desearía poder detenerla.
8. Siempre trato de apartar los problemas de mi mente.
9. Existen pensamientos que continúan surgiendo en mi cabeza.
10. Algunas veces me mantengo ocupado para evitar que ciertos pensamientos interfieran en mi mente.
11. Hay cosas en las que prefiero no pensar.
12. Algunas veces solo quisiera dejar de pensar.
13. Hago cosas con frecuencia para distraerme de mis propios pensamientos.
14. Tengo pensamientos que trato de evitar.
15. Hay muchos pensamientos que tengo que no comparto con nadie.

Scoring notes
(1) Suppression subscale (sum of items 1,8,10,11,12,13,14,15).
(2) Intrusion subscale (sum of items 2,3,4,5,6,7).
(3) Items 6 and 9 were dropped due to dual loadings (significant loadings on both factors).