A Spanish Version of the Barber Suggestibility Scale for the Puerto Rican Population

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A SPANISH VERSION OF THE BARBER SUGGESTIBILITY SCALE FOR THE PUERTO RICAN POPULATION

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Abstract: Currently in Puerto Rico, there are no reliable and valid instruments to assess hypnotic responsiveness. The most widely utilized scales have not been scientifically translated and adapted with Puerto Ricans. In the present study, the Barber Suggestibility Scale (BSS) was translated and adapted using back-translation and decentralization. The translated BSS (the ESB) was individually administered to Puerto Rican college students (N = 85). No significant differences were found among the mean scores for the current sample on the ESB and the 1965 sample on the BSS. Both samples had similar score distributions. The internal consistency of the ESB was adequate, and there were significant correlations among scale items and total scores. The authors conclude that the ESB is an adequate instrument to measure hypnotic response within the Puerto Rican population.

The assessment of hypnotic response has become widely utilized in clinical and research settings. When a clinician or researcher is planning to use hypnotic interventions, it is important to assess a person’s level of hypnotizability. This is to inform initial treatment planning, to be able to document the effects of interventions, and to justify hypnotic treatment (Lynn & Shindler, 2002). Another important reason is to evaluate the expectancies and level of motivation an individual has toward the process. As Barber stated (1965), response to hypnotic

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suggestions can be greatly influenced by a person’s expectancies and motivation.

The Barber Suggestibility Scale (BSS) (Barber, 1965) distinguishes itself fundamentally from other hypnotizability scales. Barber believed that the construct of hypnotizability was greatly influenced by suggestibility. He designed the BSS with the purpose of manipulating antecedent variables (test instructions), which could influence test scores. Therefore, the BSS can assess suggestibility under a variety of preceding experimental conditions: a hypnotic induction, motivational instructions, or with no instructions at all. The BSS is a scale of eight suggestions. Items are measured in two subscales: the objective subscale (OS), which measures behavioral indicators of suggestibility; and the subjective subscale (SS), which evaluates if the subject actually felt the suggested effect.

In several studies, Barber (1965) reported a test-retest reliability of .82 to .88 for the OS and .82 for the SS. The internal consistency was .84 and .88 for the OS and SS, respectively. He also found that the antecedent test condition of hypnotic induction had a significant effect on the outcome of both subscales. This instrument was selected for the present study because it allows for the evaluation of response to suggestion under a variety of conditions and because it offers important information regarding the objective and the subjective experiences of the test subjects.

The purpose of this study was to translate the BSS to the Spanish language and to adapt it to the Puerto Rican population. The research process included the following stages: back-translation, decentralization, evaluation of the preliminary form by a group of expert judges, and the administration of the instrument.

The back-translation (Brislin, 1986; Brislin, Lonner, & Thorndike, 1973) was conducted by two Puerto Rican translators working independently, with technical assistance from the primary researcher as needed. The researchers conducted the decentralization, which consisted of comparing the translated form with the original form to ensure conceptual and cultural equivalence. Then the revised preliminary form was evaluated by a panel of five judges with instructions to evaluate the scale according to their area of expertise and to identify if it was acceptable for use. Their unanimous conclusion was that the scale was acceptable and most judges offered recommendations to address language complexity and cultural appropriateness. The resulting instrument was the “Escala de Sugestionabilidad de Barber” (ESB).[^1]

[^1]: A copy of the ESB is available from the authors upon request.
METHOD

Participants

The sample was composed of a group of Puerto Rican college students \((N=85)\), as Barber’s (1965) original sample was also composed of college students. The inclusion criteria for participation in the study were subjects who were active college students, at least 18 years of age, and who identified themselves as Puerto Rican with Spanish as their first language. All the subjects in the sample indicated they had lived in Puerto Rico most of their lives. The racial origin of subjects was not explored because most Puerto Ricans do not relate their identification and participation in the Puerto Rican culture to the color of their skin. Most Puerto Ricans are of a mixed racial background, and specific classifications of race would have been unreliable. The sample was recruited at a private graduate university of psychology in San Juan, Puerto Rico, as well as at a public university in Río Piedras, Puerto Rico. Of the participants, 30.6% were male and 69.4% female, and their ages ranged from 19 to 43 years of age. Most of the students were in a doctoral program (83.5%); others came from bachelor’s (11.8%) and master’s level programs (4.7%).

Equipment

To replicate the methods used by Barber (1965) a lamp with intermittent light and a metronome were used for the hypnotic induction. Our lamp was modified so that it would blink every half second—along with the rhythm of a programmed metronome, which was set at one beat per second. A digital chronometer was used. The auditory stimulus that is needed for Item 7 was created by hitting a small galvanized zinc panel with the aluminum tip of a fountain pen.

Procedure

The participants were recruited by posting flyers on the campus’s bulletin boards and by making short announcements on various lectureships. The researcher conducted an unstructured preadministration interview with each participant to answer additional questions about the study. This was helpful in lowering the participant’s anxiety and creating positive expectancies. The administration was also in individual sessions and after it was concluded a postadministration interview was conducted to assess the participant’s satisfaction with the experience. After the procedure, each participant received an informative brochure on the uses of hypnosis as a reward for their participation.
RESULTS

To assess the effectiveness of the ESB, we compared the mean scores of both versions of the test. The BSS mean scores for the hypnotic induction condition were 5.18 ($SD = 1.99$) (OS) and 4.72 ($SD = 2.08$) (SS). The present study also utilized the hypnotic induction as the antecedent condition. The ESB mean scores were 5.80 ($SD = 2.10$) (OS) and 4.60 ($SD = 2.30$) (SS).

The comparison of the means yielded a $t = -1.84$ (critical $t$ value $= 1.96$, $p = .05$) for the OS and a $t = .44$ (critical $t$ value $= 1.96$, $p = .05$) for the SS. The findings indicate that no significant differences were found between the mean scores of the BSS and the ESB in either of the subscales. Therefore the data confirms the primary hypothesis of this study that there would be no significant differences between the scores of the Puerto Rican sample (ESB) and the scores of the original United States sample (BSS).

The scores of the BSS and the ESB have similar distributions. For the OS, 8% of the BSS participants obtained scores from 0 to 1.5, 18% scored from 2 to 4.5, and 74% scored from 5 to 8. Of the ESB sample, 4.7% scored from 0 to 1.5, 37.6% from 2 to 4.5, and 57.7% from 5 to 8. On the SS, 11% of the BSS sample scored from 0 to 1, 35% from 2 to 4, and 53% from 5 to 8. In the ESB sample, 9.4% scored from 0 to 1, 30.5% from 2 to 4, and 60.1% from 5 to 8. The majority of subjects on both versions tended to score 5 or more points on both subscales (more than 50%). A minority tended to score on the low end of the distribution. It is fair to conclude that the subjects’ scores on the ESB tended to be skewed toward the high end of hypnotizability. This is consistent with Barber’s (1965) BSS data.

The ESB reliability quotients are also adequate. The OS obtained a .78 alpha coefficient and a .70 split-half coefficient. The SS obtained a .74 and a .70, alpha and split-half coefficients, respectively. Given these findings, the reliability of the instrument meets the criteria suggested by Nunnally (1978) as a minimum for the acceptability of an instrument.

Comparisons between each item and the total score of each subscale (OS and SS) were made in order to evaluate the content homogeneity of the ESB. This analysis was performed by correlating each individual item with the total score on its scale minus that item. As illustrated in Table 1, high correlations were obtained between all items from both subscales (OS and SS) and their total scores.

DISCUSSION

The scores of the Puerto Rican subjects on the ESB did not significantly differ from the scores of their United States counterparts
Table 1
The ESB: Correlations Between the Items and its Total Score Minus the Item

<table>
<thead>
<tr>
<th>Item</th>
<th>Objective Scale (OS)</th>
<th>Subjective Scale (SS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Arm Lowering (Bajar el Brazo)(^a)</td>
<td>.323**</td>
<td>.352**</td>
</tr>
<tr>
<td>2. Arm Levitation (Levitación del Brazo)(^a)</td>
<td>.525**</td>
<td>.501**</td>
</tr>
<tr>
<td>3. Hand Lock (Manos Selladas)(^b)</td>
<td>.517**</td>
<td>.453**</td>
</tr>
<tr>
<td>4. Thirst Hallucination (&quot;Alucinación&quot; de Sed)(^b)</td>
<td>.346**</td>
<td>.227*</td>
</tr>
<tr>
<td>5. Verbal Inhibition (Inhibición Verbal)(^b)</td>
<td>.608**</td>
<td>.557**</td>
</tr>
<tr>
<td>6. Body Immobility (Inmobilidad del Cuerpo)(^b)</td>
<td>.662**</td>
<td>.573**</td>
</tr>
<tr>
<td>7. &quot;Posthypnotic-like&quot; Response (Respuesta &quot;Poshipnótica&quot;)(^a)</td>
<td>.562**</td>
<td>.430**</td>
</tr>
<tr>
<td>8. Selective Amnesia (Amnesia Selectiva)(^a)</td>
<td>.445**</td>
<td>.417**</td>
</tr>
</tbody>
</table>

Note. The interpretation of the items for the OS utilizes both dichotomous and continuous scales. The interpretation of the items for the SS uses a dichotomous scale. Spearman’s rho was utilized for dichotomous items and the Pearson’s product-moment coefficient was used for continuous ones.

\(^a\)Dichotomous item on the OS. \(^b\)Continuous item on the OS.
*Significant at the .05 level.
**Significant at the .01 level.

on the BSS. As a result, it can be concluded that both samples behaved similarly in reaction to the test. The distributions of scores for both versions show a similar skew towards the high end of hypnotizability.

In the comparison of the individual items of both subscales of the ESB (OS and SS) with their total score, all the items correlated significantly with their total score. This can be an indicator that each of the individual items is representative of the general concept or factor of the subscales to which it belongs. As described by Brislin (1986) this correspondence of factors supports the adequacy of the translation. The ESB alpha coefficients (OS = .78 and SS = .74) and the split-half indexes (OS = .70 and SS = .70) were adequate, indicating it is a reliable instrument.

One limitation of this study is that the null is hypothesized and being that the null is nondirectional, conclusions derived from it have limited power. Ideally, this study would have had other psychometrically sound hypnotic suggestibility instruments in the Spanish language to compare to the ESB. This would have allowed the investigators to use previous Puerto Rican or Spanish-speaking sample trends to predict the direction in which the results might go. Unfortunately, there are no comparable instruments available in Spanish and validated for the Puerto Rican population.
Another limitation is that the sample size, given its small effect size, is not enough to reliably detect between-group differences. In order for the power of the study to be maintained at least at 80% ($p > .05$), 393 participants should have been recruited.

Despite the limitations, the present study constitutes a necessary and useful step in standardizing hypnotizability scales for a Spanish-speaking population of young participants. Hypnotic research in Latin America and Puerto Rico has been nearly absent from international journals and other professional venues. Part of this unfortunate state of affairs is that there is a scarcity of reliable and valid instruments to assess hypnotizability in Spanish. The present investigation with the ESB should enable other Latin American colleagues to use the ESB for research projects in their respective Spanish-speaking countries. In that way, we can truly assess the possible impact of cultural influences on hypnotic responsiveness at the international level. We also hope that by sharing the methodological process involved to obtain an accurate and culturally valid translation, other researchers will be inspired to adapt measures that could further the science of hypnosis in Latin America and other countries hosting Spanish-speaking Latin American populations.

References


PUERTO RICAN VERSION OF THE BSS


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Une version en langue espagnole de l’échelle de suggestibilité de Barber à l’intention de la population portoricaine

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Résumé: À Porto Rico, il n’existe actuellement aucun instrument fiable ou valable d’évaluation de la réceptivité hypnotique. Les échelles les plus couramment utilisées n’ont pas encore été traduites scientifiquement et adaptées aux Portoricains. Dans le cadre de la présente étude, l’échelle de suggestibilité de Barber (Barber Suggestibility Scale/BSS) a été traduite et adaptée à l’aide de contre-traduction et de décentralisation. La version espagnole du BSS (l’ESB) a été administrée individuellement à des universitaires portoricains (N=85). Aucune différence significative n’a pu être relevée entre les résultats moyens de l’échantillon actuel ayant été soumis à l’ESB et l’échantillon auquel a été administré le BSS en 1965. Les distributions des résultats étaient semblables dans les deux échantillons. La cohérence interne de l’ESB s’était révélée adéquate, et il existait une importante corrélation entre les items évalués par l’échelle et les résultats totaux. Les auteurs en ont conclu que l’ESB constitue un instrument adéquat de mesure de la réceptivité hypnotique chez la population portoricaine.

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Una versión en español de la Escala de Sugestionabilidad de Barber para la población puertorriqueña

Lara Guzmán-Hosta, Alfonso Martínez-Taboas, y José Rodríguez-Gómez
Resumen: Actualmente en Puerto Rico no hay instrumentos válidos y confiables para evaluar la respuesta hipnótica. Las escalas utilizadas más ampliamente no se han traducido y adaptado científicamente con los puertorriqueños. En este estudio, la Escala de Sugestionabilidad de Barber (BSS) se tradujó y adaptó, usando decentralización y traducciones en ambos sentidos. Administramos individualmente el BSS traducido (el ESB) a estudiantes universitarios puertorriqueños (N=85). No encontramos diferencias significativas entre las puntuaciones promedio de nuestra muestra y la original del BSS de 1965. Ambas muestras tuvieron distribuciones similares de puntuación. La consistencia interna del ESB fue adecuada y hubieron correlaciones significativas entre las puntuaciones de
los reactivos y las totales. Los autores concluyen que el ESB es un instrumento adecuado para medir la respuesta hipnótica dentro de la población puertorriquena.

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