Battelle Developmental Inventory
2nd edition
Spanish

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BDI-2 Spanish User's Guide

Overview

This user's guide provides an introduction to the *Battelle Developmental Inventory, 2nd Edition, Spanish* (BDI-2 Spanish) test materials. Key points include the reason for the instrument's development, a description of how the materials differ from their English counterparts, and practical suggestions for the instrument's use in assessing young children (and/or their parents or caregivers) whose dominant language is Spanish. This guide is not intended to replace the BDI-2 Examiner's Manual (Newborg, 2005). A thorough understanding of the information in the Examiner's Manual is a prerequisite for learning how to effectively incorporate the Spanish materials into the assessment process. The reader is strongly encouraged to review both "Cautions for Testing Individuals with Unique Backgrounds" in Chapter 1 of the BDI-2 Examiner's Manual (pp. 11–13) and *Standards for Educational and Psychological Testing* (American Educational Research Association [AERA], American Psychological Association [APA], & National Council on Measurement in Education [NCME], 1999) for a more thorough discussion of assessment-related cautions.

Introduction

The 2000 U.S. Census indicated significant changes in the demographic pattern of the United States. Among the early-childhood age groups included in the BDI-2 research, the Hispanic/Latino group was the largest U.S. minority group represented (18.9%). This census was the first in which Hispanic/Latino groups were identified as the nation's largest minority group, reflecting a trend that is predicted to increase significantly until at least 2050 (U.S. Census Bureau, 2001). The Hispanic/Latino group, with a median age of 26.4, is considerably younger than the total U.S. population, whose median age is 35.4. Additionally, for all age groups younger than 35, the number of both males and females exceeded the corresponding proportions of the total population. Hispanic/ Latino children (those younger than 18) comprised more than one-third of the population of their ethnic group compared with young people in general, who comprised only one-fourth of the total population. The use of English as the exclusive language spoken at home among the Hispanic/Latino groups was reported at only 21%, and among these groups, English was reported to be spoken "very well." More than 40% of the Hispanic/Latino group said they spoke English less than "very well." Spanish was identified 99% of the time as the primary language spoken in the home. People of Mexican origin were the largest Hispanic/Latino group in the United States, representing 59% of the country's total Hispanic/ Latino population. Puerto Ricans and Cubans were the next two distinct groups, representing 9.7% and 3.5% of the Hispanic/Latino population, respectively (Ramirez, 2004). Given the large number of parents and young children whose primary language is Spanish, it is clear that high-quality materials designed to measure the children's developmental strengths and learning opportunities are necessary.

Design of the BDI-2 Spanish Test Materials

The BDI-2 Spanish test materials offer a practical approach for the development of assessment materials across languages. The instrument was designed to retain as much of the structure and feel of the English BDI-2 test materials as possible and is offered at a low cost to early childhood professionals and school districts. Because most of the developmental milestones assessed by the BDI-2 are neither language nor culture specific, it was possible to develop an instrument that largely paralleled the English version.

The BDI-2 Spanish is not a complete translation of every BDI-2 English component; only select BDI-2 materials were translated into Spanish. All instructions and questions that are spoken directly to the child or to the parent or caregiver by the examiner have been translated into Spanish. The translated Spanish text has been inserted within the context of the English materials, thus enabling the bilingual examiner to easily identify when Spanish is to be spoken. In addition, any visual stimuli with accompanying printed text that the child must use to respond to an item have been translated and are included on the CD-ROM as special printed components. To aid the examiner, both the Screening Record Form and the longer Record Form were translated into Spanish, and master sheets for two pages in the Student Workbook are included for easier recording of responses and scoring. The provision of Spanish-language materials also extends to the BDI-2 ScoringPro™ Software and Palm Powered™ administration software. Items and special administration options are included on all versions of the software. These features will be useful in establishing a robust set of national norms for the Spanish materials and will allow local schools to establish their own normative information or screening-test cut scores.

Also included in the software are reports for the Screening Test and the full BDI-2 that can be generated in Spanish. These reports are designed for parents or caregivers and are identical in structure to the English-language versions.

Developing test materials for different languages is challenging. The first issue that arises is the translation or adaptation of the materials. In the BDI-2 Spanish, the vast majority (96%) of the BDI-2 items and materials are translations of the English items into their Spanish counterparts. The remaining items consist of translated materials that were adapted to measure the same developmental milestones contained in the English-language materials. Only 20 of the 450 BDI-2 items required any significant modification. Of these 20 items, 16 Communication Domain items (7 from the Receptive subdomain and 9 from the Expressive subdomain), 2 Motor Domain items, and 2 Cognitive Domain items underwent modification. Also, 3 of the 20 items are part of the BDI-2 Screening Test, and 18 are located in areas of the test that typically begin with children age 5 or older.

The modifications for the adaptation can be classified into three basic types. The first type involved presenting new materials in Spanish for the child

to use to respond to the task presented. An example of this type of item would be copying a word on a piece of paper (which constitutes one of the Perceptual Motor skills). To measure this milestone fairly, the word, or a substitute word of similar difficulty, is presented in Spanish. This type of adaptation is best described as a simple substitution of words.

The second type of adaptation involved translation of English items that did not have comparable linguistic equivalents in Spanish; specifically, the recognition and correct use of irregular plural forms (e.g., mouse/mice; goose/geese), the irregular past tense of verbs (e.g., swim/swam), or plural nouns that end with an /ez/ sound (e.g., box/boxes). Such concepts are not part of Spanish grammar or language structure. The Spanish items are administered primarily as a placeholder to allow for equal numbers of items to be administered across the English and Spanish test materials. Although the milestone that is measured is very important in the English version, it appears as a relatively simple item in the Spanish version. Given the fact that the students will ultimately need to learn irregular components of English grammar, it was decided to retain these items in the Spanish materials so that examiners can easily verify when a child has mastered the English milestone. In many cases, the only significant change to an item is a note to the examiner that acknowledges the structural differences between the two languages.

The third type of adaptation involved the skills associated with rhyming, comparison/identification of beginning or ending sounds of words, and clear articulation of familiar words. The challenge was to assess the same milestones in Spanish that were being measured in English. The immediate task was to identify age-appropriate words in Spanish that measured a wide range of key phonemic sounds important for the child to master in Spanish. Next, a subgroup of the words that could also be presented easily as pictures was developed. Finally, the words were reviewed to ensure that they were essentially universal across variations of the Spanish language before the final items could be created. These adaptations resulted from the need to integrate cross-cultural, auditory, pictorial, and language-difficulty concerns, along with concerns from the child-development field regarding the presentation of the modified Spanish items.

All of the BDI-2 Spanish materials are designed to be used in the same manner as the English

materials. In some instances, the assessment may be conducted by a team consisting of an English-speaking examiner and a Spanish-speaking examiner. Examiners will need the following components from the English BDI-2 test materials:

- Complete Manipulatives Kit
- Set of Presentation Cards
- Puzzle/Strip Sheet components
- Student Workbook
- Examiner's Manual
- Materials from the BDI-2 Screening Test kit, including:
  - Screening Test Worksheet blackline master
  - Screening Test Presentation Cards
  - Screening Test Stimulus Book

Table 1 presents the major modifications of the BDI-2 Spanish materials. It is recommended that examiners pay particularly close attention to these modifications during administration.

Printing and Binding

The BDI-2 Spanish materials are provided in an electronic (CD-ROM) format. The CD-ROM contains all the files needed to create a full set of the Spanish materials. You will need to print and assemble these materials before you begin any assessments. One reason the CD-ROM format was used was to minimize expense for the customer and to use the benefits of modern technology in the delivery of quality assessment tools. Another advantageous reason for using electronic files is that if an Item Test Book is lost or a page becomes damaged, the lost or damaged piece can be replaced without having to purchase a completely new set of materials.

Table 1

Major Modifications of the BDI-2 Spanish Materials				
Item Number[a]	Additional English Text or Special Notes Added to the Item	New Stimulus Book Page Created	New Presentation Cards Created	New Student Workbook Blackline Master Created
RC 28	■			
RC 29	■			
RC 34		■		
RC 35		■		
RC 36	■			
RC 37		■		
RC 39	■			
EC 12	■			
EC 19	■			
EC 27	■			
EC 29 / ST 54	■			
EC 34/ ST 58	■	■		
EC 36	■	■		
EC 37				
EC 40				
EC 44	■			
PM 16	■			■
PM 18	■			■
RA 20	■	■	■	
PC 28/ ST 97	■	■	■	

[a]Abbreviations are as follows: RC=Receptive Communication; EC=Expressive Communication; ST=Screening Test; PM=Perceptual Motor; RA=Reasoning and Academic Skills; PC=Perception and Concepts.

If you have not already done so, you are strongly encouraged to print and review the "Read Me" file (BDI2_Readme_File.pdf) provided with your CD-ROM. This file consists of a brief letter identifying the content of the other files on the disk. It also includes suggestions for appropriate printer and paper combinations for printing each of the files. The instructions can help to create high-quality but inexpensive materials that are similar in look and feel to the English materials. All the printing can be generated from a color desktop printer using standard-bond paper. A high-speed, two-sided laser printer is recommended for printing the six Item Test Book files from the CD-ROM. Another widely available option is to take the CD-ROM to a local copying service and have the materials printed and bound professionally.

Major Steps of the Translation Process

The translation process for the BDI-2 underwent three distinct stages, using three groups of mostly independent translators from numerous Spanish-speaking countries. At each stage, the goal was to produce a "consensus" translation that would be suitable for the broad group of Spanish-speaking cultures within the population of the United States.

The initial translation stage began by using the items from the BDI-2 English Tryout Edition to provide a foundation for the instrument. The goal was to establish a core set of Spanish text that was based on the Tryout items and to identify items that would be challenging either because of the differences between English and Spanish grammar or idioms or because of cultural biases. This first effort was intended to be only a starting point, as numerous items would later be added or modified for the Standardization items.

During the standardization of the English BDI-2, the revised items were reviewed and translated as needed by a different team of native Spanish speakers. In this second stage, the process again moved toward achieving a consensus translation, using the Standardization items as a new reference point. Aware that no major changes would be made to the English items after the standardization was completed, the team knew it would have a well-polished set of administration instructions that would require only a final review before the Spanish version of the BDI-2 could be published.

After the final set of items for the published English materials had been determined, translation for the text that would be used for the Record Forms and the BDI-2 ScoringPro Software was begun. This third stage of the work focused on identification

of any remaining items that would require adaptation to the English items and translation of the final text of the BDI-2 developmental milestones. This final text was needed for inclusion in the scoring software that would be sent to customers before the Spanish printed materials would be available. Shortly after the publication of the English BDI-2, production of the final Spanish materials began. The production process included implementation of minor changes from the English materials and a final review of the translation for universality of the text and faithfulness to the context and content of the items. The materials included on the CD-ROM are the culmination of this developmental process.

Key Points Related to Administration

Administration of the BDI-2 in Spanish is nearly identical to administration of the English version. It is anticipated that the model most frequently used for administration will involve a bilingual examiner experienced in assessment in both languages. Another model may use a team approach, in which the Spanish assessment is conducted by a native Spanish speaker in cooperation with, or under the supervision of, an English-speaking examiner. Either option is acceptable for administration, but the latter requires close, ongoing communication between the two examiners to ensure consistency of assessment procedures.

It is important to remember that administration of the BDI-2 Spanish materials can follow various paths, depending on the English proficiency of the parent(s) and the child. The simplest administration model is one in which the full assessment is completed entirely in Spanish with both the parent(s) or caregiver(s) and the child. This model is comparable to the standard administration, in which the English materials are administered to a child and parent(s) or caregiver(s) who speak only English in the home.

Another possible model is one in which the child's English-language skills are relatively strong as a result of exposure to English-language radio and television, positive English-language educational opportunities, and interaction with older siblings who primarily use English for communication. In this model, the child may complete all the structured items of the BDI-2 in English and the parent(s) or caregiver(s) may be interviewed in Spanish (if that is more comfortable for them). Using this model, followed by the readministration in Spanish of any structured items the child missed in English, offers an opportunity to determine the child's maximum developmental level across both

languages and the extent to which a bilingual environment has either impeded or supported the child's communication and cognitive skills.

Yet another possible scenario is one in which the parents are English speaking, but the child is not. This pattern often occurs in international adoption or foster care situations. It is important to remember that the goal of any evaluation using the BDI-2 in any combination of English and Spanish is to obtain a comprehensive picture of the child's developmental strengths and opportunities for learning.

Scoring

The procedures for scoring individual items of the BDI-2 Spanish version are identical to those of the English BDI-2. For each item, the examiner scores the child's performance as a 2-, 1-, or 0-point response and indicates which procedure (Structured, Observation, or Interview) was used to gather the item-level information. After the assessment is completed, raw scores for each subdomain may be calculated manually or with the aid of the BDI-2 ScoringPro Software. Individuals who use the Palm-based Scoring Assistant software will find the various options for administration in English or Spanish for the Structured, Observation, and Interview items a great timesaver and organizer for all the materials and for scoring. The Palm-based software uses an electronic record form, which allows information to be transferred directly to the ScoringPro software to complete the scoring and report-generation activities.

Numerous scores and scoring options are provided for the BDI-2 Spanish materials. The first level of scoring information provided is age equivalents. Age equivalents are based on data gathered from the English standardization sample of 2,500 children from across the United States. Age-equivalent scores are the simplest scores to calculate using the tables in Appendix A of the BDI-2 Examiner's Manual (Newborg, 2005). Currently, no data are available on the age equivalents for Spanish-speaking children, but there is no reason to believe that there would be any significant differences between scores for Hispanic/Latino and non-Hispanic/Latino children. The only area of possible concern may be the Communication subdomains for children 5 years and older, in which several of the items were modified to align the behavioral milestone with appropriate content for the two languages. Of the 20 items presented in Table 1, 18 are Structured-only items that require a spoken response from the

child for the most accurate score. At this time, there is no reason to believe that there would be any differences in scores between English and Spanish for items administered using the Observation/Interview administration procedures.

Examiners who have administered the Spanish version of the BDI-2 and who wish to calculate Scaled Scores and Standard Scores using the English BDI-2 Standardization norms are cautioned to do so only experimentally. Until examiners establish local norms for their district or state, or the publisher releases Spanish norms, an element of uncertainty will surround the accuracy of the scores. As mentioned previously, the area that potentially may be most affected by the inherent differences between the two languages is the Communication Domain. Anyone using the English norms with the Spanish BDI-2 test data is advised to consider the results to be experimental. Individuals and organizations interested in helping to develop normative data related to the Spanish version of the BDI-2 are asked to contact Riverside Publishing via e-mail at rpcwebmaster@hmco.com or call 800.323.9540.

Test-Retest Procedure

The test-retest procedure holds great promise for anchoring the Spanish BDI-2 materials to the English normative data. This procedure is similar to the assessment procedure used for the *Bilingual Verbal Ability Tests* (BVAT) (Muñoz-Sandoval, Cummins, Alvarado, & Ruef, 1998). For the BDI-2, assuming that the child and the parent(s) or caregiver(s) speak very little English, the Structured BDI-2 items are first administered to the child in English, and a basal and ceiling are established for each subdomain. All the Observation/Interview items are administered to the parent(s) or caregiver(s) in Spanish, and there is no retesting on the interview items. Upon completion of the English administration, any Structured item having a score of 1 or 0 is readministered in Spanish and the new score is recorded.

The evaluation continues in Spanish until the child achieves the ceiling level for each subdomain. The benefit of this procedure is that it allows the full abilities of the child to be demonstrated. The difference between the English and Spanish raw score totals for each subdomain can provide a more accurate picture of the role that language plays in the child's development and how much more help the child needs to achieve a high level of English proficiency.

Summary

The BDI-2 Spanish test materials provide a significant opportunity to assess the developmental strengths and learning opportunities for the youngest members of the Hispanic/Latino group—the largest and fastest-growing minority group in the United States. The full potential of these materials will be realized when local and/or national norms are established, and the possibilities and rewards will be great.

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