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30 Analyzing Spanish Speakers Cordoba Naming Test Performance

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Objective: A 30-item confrontation naming test was developed in Argentina for Spanish speakers, The Cordoba Naming Test (CNT). The Boston Naming Test is an established confrontation naming task in the United States. Researchers have used the Boston Naming Test to identify individuals with different clinical pathologies (e.g., Alzheimer's disease). The current literature on how Spanish speakers across various countries perform on confrontational naming tasks is limited. To our knowledge, one study investigated CNT performance across three Spanish-speaking countries (i.e., Argentina, Mexico, and Guatemala). Investigators found that the Guatemalan group underperformed on the CNT compared to the Argentine and Mexican groups. The purpose of this study was to extend the current literature and investigate CNT

performance across five Spanish-speaking countries (i.e., Argentina, Mexico, Guatemala, Colombia, United States). We predicted that the Argentine group would outperform the other Spanish-speaking countries.

Participants and Methods: The present study sample consisted of 502 neurologically and psychologically healthy participants with a mean age of 29.06 (SD = 13.41) with 14.75 years of education completed (SD = 3.01). Participants were divided into five different groups based on their country of birth and current country residency (i.e., United States, Mexico, Guatemala, Argentina, & Colombia). All participants consented to voluntary participation and completed the CNT and a comprehensive background questionnaire in Spanish. The CNT consisted of 30 black and white line drawings, ranging from easy to hard in difficulty. An ANCOVA, controlling for gender, education, and age, was used to evaluate CNT performance between the five Spanish-speaking country groups. Meanwhile, a Bonferroni post-hoc test was utilized to evaluate the significant differences between Spanish-speaking groups. We used a threshold of $p < .05$ for statistical significance.

Results: Results revealed significant group differences between the five Spanish speaking groups on the CNT, $p = .000$, $\eta^2 = .48$. Bonferroni post-hoc test revealed that the United States group significantly underperformed on the CNT compared to all the Spanish-speaking groups. Next, we found the Guatemalan group underperformed on the CNT compared to the Argentinian, Mexican, and Colombian groups. Additionally, we found the Argentinian group outperformed the Mexican, Guatemalan, and United States groups on the CNT. No significant differences were found between the Argentinian group and Colombian group or the Mexican group and Colombian group on the CNT.

Conclusions: As predicted, the Argentinian group outperformed all the Spanish-speaking groups on the CNT except the Colombian group. Additionally, we found that the United States group underperformed on the CNT compared to all the Spanish-speaking groups. A possible explanation is that Spanish is not the official language in the United States compared to the rest of the Spanish-speaking groups. Meanwhile, a possible reason why the Argentinian and Colombian groups demonstrated better CNT performances might have been that it was less culturally sensitive than the United States, Mexican, and

Guatemalan groups. Further analysis is needed with bigger sample sizes across other Spanish-speaking countries (e.g., Costa Rica, Chile) to evaluate what variables, if any, are influencing CNT performance.

Categories: Cross Cultural Neuropsychology/
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31 Examining the Mechanisms of Verbal Working Memory Capacity Consumption in Monolingual Spanish-Speaking Individuals

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Objective: Converging evidence across languages suggests that the *word length effect* (WLE; rate of number of syllables, phonemes, or pronunciation times per word) significantly contributes to estimates of verbal working memory (WM) capacity limits in the storage phase, but not in the manipulation phase (i.e., *word length effect decay*), of WM. Direct examination of the WLE on verbal WM performance within monolingual Spanish-speakers has not been reported. We investigated the psychophysical mechanisms of capacity consumption in Spanish-speakers across three syllabic word length rates to clarify the relative contributions of the WLE to storage (digit span forward) versus manipulation (digit span backward) memory phases within one language of monolingual speakers.

Participants and Methods: Monolingual Spanish-speaking adults (N = 84) born in Latin American countries and age 18-65 completed testing over Zoom. Inclusion criteria required proficiency in the Spanish-language; exclusion criteria were bilingualism, multilingualism, TONI-4 IQ < 85, or history of head injury/LOC. A within-group design measured the WLE across

three cognitive load conditions in the forward and backward directions of the digit span test varying in Spanish syllabic word length: the Mexican WAIS-IV Digit Span Test ("Standard Load"), and two modified measures with either a ~20% decrease ("Low Load") or ~20% increase ("High Load") in total syllables/digit relative to the Standard Load.

Results: A reverse WLE was observed on syllable accuracy percentage task performance ($p < 0.01$), such that longer word length led to higher capacity limits during storage WM. A WLE, not decay, was found on both raw score ($p < .001$) and syllable accuracy percentage ($p < 0.01$) task performances during manipulation WM, where longer word length led to lower capacity limits.

Conclusions: The reverse WLE was attributed to higher-order, executive-function cognitive strategies (such as *chunking*) that superseded negative word length effects. A larger syllabic discrepancy during manipulation WM could have superseded executive-function strategies, rendering a traditional WLE. Our study contributed more precise capacity estimates and clearer understanding of successful WM performance within monolingual, Latin American-born Spanish-speakers, helping to reduce cultural disparities in neurocognitive and neuropsychological research. Future studies may extend these findings to examine how WM capacity resources can be harnessed to improve memory strategies in clinically-applied settings with Spanish-speaking populations.

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32 A Comparison of Cut-Off Points for Invalid Cognitive Test Performance Established on Nonclinical Versus Clinical Samples for South African Educationally Disadvantaged Individuals

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