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### Title

Demographically-Corrected Norms for the Grooved Pegboard Test and Finger Tapping Test in monolingual Spanish speakers from the U.S.-Mexico Border Region

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Abstract

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GENERAL STUDIES

A-23

**Demographically-Corrected Norms for the Grooved Pegboard Test and Finger Tapping Test in monolingual Spanish speakers from the U.S.-Mexico Border Region**

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**Objective:** We developed demographically-corrected norms for US-dwelling, Spanish-speaking Hispanics on two widely used tests of motor skills - the Grooved Pegboard Test (Pegs) and Finger Tapping Test (Tapping). We then examined the effects of applying established norms for non-Hispanic Caucasians (NH Whites) and non-Hispanic African Americans (NH Blacks) on motor test results from our Hispanic population. **Participants and Method:** 254 participants living in the US-Mexico border region of San Diego, CA and Tucson, AZ completed Pegs, and a subset ( $n = 183$ ) completed Tapping. Age ranged from 19-60 and education from 0-20 years, with 59% women. Raw test scores were converted to demographically-corrected T-scores with a fractional polynomial procedure and compared to a fitted curve for the original data. **Results:** Findings included significant main effects of education on both tests ( $p < .001$ ), and of age for Pegs ( $p < .001$ ). There was a significant interaction of sex and age on Tapping, such that older age was associated with lower scores in men only ( $p = .02$ ). The resulting normative T-scores were confirmed to be free from demographic influences. Using a  $T < 40$  cut point, rates of impairment in the Spanish speaking normative sample for dominant (D) and nondominant (ND) hands, respectively, were 17% and 14% for Pegs, and 12% and 10% for Tapping. Applying existing norms for NH Whites and NH Blacks to the raw scores of Spanish speakers generally yielded lower impairment rates on all measures, with one exception, Pegs ND, for which NH White norms overestimated impairment (23%). **Conclusions:** Normative standards from other groups are not a good fit for interpreting motor test performance in this Hispanic population, which in the current instance would have generally underdiagnosed fine motor impairment. These findings underscore the importance of appropriate, population-specific normative data- even for tests of motor ability.