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Boston Naming Test Performance in a Sample of Native American Elderly Adults

Cross-cultural neuropsychological performance and assessment studies have examined a variety of cultures, including elderly African-Americans and elderly Mexican-Americans. Little neuropsychological performance and assessment data, however, exist for elderly Native American individuals. This is a noteworthy omission, as there is recent and intense interest in the health and well-being of Native American elders (Young, 1994).

In the present study we sought to begin an initial investigation into various neuropsychological test performance of Native American elderly adults. The present study was concerned primarily with performance on the Boston Naming Test (BNT), a widely-used instrument for the assessment of language function and ability in older adults as well as individuals suspected of having dementia. Thus, performance on this test would be a good indicator of how likely our Native American participants would perform on other neuropsychological tests.

Subjects

As part of a larger dementia screening protocol (which included a battery of neuropsychological tests used by Storandt & Hill, 1989)

examining dementia prevalence in older adults, a sample of 22 Native American elderly adults (M age = 66.3 years, SD = 10.2; M education level = 8.9 years, SD = 3.8) from a reservation in North Central North Dakota completed the shortened (15-item) version of the BNT (Mack, Freed, Williams, & Henderson, 1992). Other demographic and psychometric information was also collected from all individuals, and included sex, self-rated health, types and numbers of medications currently taking, mood, and performance on the vocabulary sub-test of the WAIS-R (Wechsler Adult Intelligence Scale-Revised).

Procedure

One of the authors (B.B.), who lives on this particular reservation, was responsible for locating and testing all participants as well as collecting all data. He tested persons individually in their homes in a testing session that took no more than one hour in duration. Informed consent was first obtained, then the various demographic and neuropsychological information was collected.

Results

As mentioned previously, the focus of the present study was on BNT performance. Native American elderly adults averaged 13.3 (SD = 2.6) pictures correct out of 15 (or 53.3 items correct (SD = 10.4) if extrapolated to the 60-item version of the BNT). This pattern of results is in line with published normative data (Van Gorp, Satz, Hiersch, & Henry, 1986) from an age-matched non-native sample. These authors reported normative data from 37 older individuals they tested between the ages of 65-69 and these elderly individuals average 55.6 (SD = 2.4) pictures correct on the 60-item version of the BNT. To test the difference in BNT performance between the present sample and that obtained from Van Gorp et al. (1986), a t -test was calculated and resulted in $t(57) = 1.28, p > .05$. This similarity across the two groups confirms that the present sample of Native American elderly adults did not differ significantly from the Van Gorp et al. (1986) sample in their BNT performance.

To examine the relationship of BNT performance to other measures obtained from participants, a correlation coefficient was calculated between education level and BNT performance and resulted in $r(20) = +.73, p < .01$. Additionally, a second correlation was calculated between BNT performance and WAIS-R performance ($M = 41.1, SD = 17.9$), and resulted in $r(20) = +.70, p < .01$. The pattern of correlational results is similar to that often obtained in non-native elderly samples, further supporting the pattern of BNT test performance results detailed above.

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