

COMPARISON OF THE WISC-R AND PPVT-R WITH NAVAJO CHILDREN¹

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Explored the relationship between the Wechsler Intelligence Scale for Children-Revised (WISC-R) and the Peabody Picture Vocabulary Test-Revised (PPVT-R) for a sample of Native American children who reside on the Navajo Reservation. The sample consisted of 37 children aged 6 to 12-4 ($M = 8-9$, $SD = 1-10$). The PPVT-R standard scores correlated significantly ($p < .001$) with the WISC-R Verbal IQ (.87), Performance IQ (.52), and Full Scale IQ (.82). The mean PPVT-R standard score was significantly lower ($p < .001$) than all of the mean WISC-R IQ scores. Implications of these findings for the use of the PPVT-R are discussed.

The Peabody Picture Vocabulary Test (PPVT) (Dunn, 1959) has been used widely as a measure of verbal comprehension, and it is likely that the Revised PPVT (Dunn & Dunn, 1981) also will be popular. The PPVT-R was expanded and standardized on a representative sample of 4,200 children aged 2½ to 18 and stratified on the basis of sex, race, geographic location, occupation of major wage earner, and community size. Because the PPVT-R has only become available recently, few studies have investigated its relationship to other instruments.

Naglieri (1981a) reported that the mean PPVT-R was nearly identical to the mean McCarthy Scales of Children's Abilities General Cognitive Index for a sample of normal children. The PPVT-R also correlated significantly ($p < .005$) and positively with the Verbal, Quantitative, General Cognitive, and Memory Indices of the McCarthy. Additionally, the PPVT-R correlated significantly ($p < .05$) with all of the Peabody Individual Achievement Test Subtests except Mathematics. Naglieri (1981b) and Prasse and Bracken (1981) investigated the relationship between the PPVT-R and WISC-R for mentally retarded children.

Naglieri (1981b) reported that the PPVT-R and WISC-R correlated positively and significantly ($p < .005$) and that the mean PPVT-R standard scores were not significantly different from the mean WISC-R Verbal, Performance, or Full Scale IQ scores. Prasse and Bracken (1981) report significant differences between the mean PPVT-R standard score and the WISC-R's IQ scores and no significant PPVT-R/WISC-R correlations. However, as stated by Naglieri (1981b), methodological errors make the finding of mean differences suspect, and the PPVT-R/WISC-R coefficients reported by Prasse and Bracken are positive and significant ($p < .005$) when corrected for restriction in range.

There is evidence that suggests that the PPVT-R is correlated significantly with the McCarthy Scales, Peabody Individual Achievement Test, and the WISC-R for normal and mentally retarded children. The focus of the present study was to explore the relationship between the PPVT-R and the WISC-R standard scores for a sample of Navajo children who reside on the Navajo Reservation.

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METHOD

Subjects

The sample of 37 Navajo students (the majority of whom spoke primarily Navajo) resided in a community of approximately 1,700 located on the Navajo Reservation in northern Arizona. The 19 males and 18 females were distributed fairly evenly between the ages of 6-0 and 12-4 ($M = 8.9$, $SD = 1.10$), and none of these children was referred for an evaluation. The great majority of the children came from traditional Navajo families who had lived on the reservation for many years. The yearly income for most of the families was less than \$10,000, and only 46% of the sample resided in dwellings that had running water and electricity.

Procedure

Each child was administered the PPVT-R (Form L) and WISC-R in counter-balanced order by the same female Navajo examiner. Nearly half of the children (18) were tested with the PPVT-R followed by the WISC-R, and half WISC-R/PPVT-R in one testing session. Only English was spoken, and only English responses were scored. Pearson product-moment correlations were obtained between the standard scores yielded by the PPVT-R and WISC-R. The significance of the differences between the mean PPVT-R Standard Score Equivalent and the three WISC-R IQs were examined by correlated t -tests (Guilford & Fruchter, 1978, p. 158).

RESULTS AND DISCUSSION

The mean WISC-R Verbal IQ was 74.9 ($SD = 13.3$), Performance IQ was 103.8 ($SD = 12.7$), and Full Scale IQ was 87.4 ($SD = 11.4$). The mean PPVT-R standard score equivalent was 61.1 ($SD = 14.5$). The mean PPVT-R standard score equivalent was significantly lower ($p = .001$) than the mean WISC-R Verbal IQ ($t = 11.7$), Performance IQ ($t = 19.4$), and Full Scale IQ ($t = 19.4$). The PPVT-R standard scores correlated .87 with WISC-R Verbal IQ, .52 with the Performance IQ, and .82 with the Full Scale IQ scores. All of these coefficients are significant at $p = .001$. These coefficients should be considered slight underestimates of the correlational relationship between the variables due to restriction of range. The PPVT-R correlated positively and significantly with the WISC-R subtests Information, Similarities, Arithmetic, Vocabulary, Comprehension, and Picture Arrangement ($p < .01$) and Picture Completion, Block Design, and Object Assembly ($p < .05$).

The present findings support previous reports of a strong correlational relationship between the PPVT-R and the WISC-R. Despite the correlational relationships, the Revised PPVT yielded a significantly lower mean score than the WISC-R for this sample of Navajo children. This finding underscores the need *not* to consider the PPVT-R's standard score as a measure of intelligence for Native American children such as those in the present study, and probably most Native Americans whose primary language is not English. In addition, the present findings suggest that the Verbal IQ should not be used as a measure of verbal intelligence because it too is undoubtedly influenced by poor English language skills.

The PPVT-R Standard Score Equivalent was also quite low in comparison to the WISC-R's subtest scores. The Vocabulary subtest scaled score was the lowest ($M = 4.38$), which when converted to a common metric (mean of 100 and SD of 15) as the PPVT-R, is 71.9, and still 10 points higher. This suggests that the PPVT-R is likely to be even lower than the most similar WISC-R subtest, which suggests that further investigations are warranted if the PPVT-R is to be used as a measure of verbal (English) comprehension.

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IQ DISCREPANCIES BETWEEN THE BINET AND WISC-R IN CHILDREN WITH DEVELOPMENTAL PROBLEMS¹

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Administered the Stanford-Binet and WISC-R to 121 children with developmental problems. Twenty-eight of the children received absolute differences of 12 points or greater between the Binet and WISC-R FSIQs, with a mean difference of 16.8 and range of 12 to 28 points. While most of these discrepancies were attributable to expected differences between the tests, there were 10 instances of complete incongruence between the Binet and all the WISC-R IQs. Clinical interpretations of four Binet/WISC-R discrepancy patterns were discussed.

This paper describes several patterns of IQ discrepancies between the Stanford-Binet and Wechsler Intelligence Scale for Children-Revised (WISC-R). While these instruments, in general, will yield similar IQ estimates for normal children (Wechsler, 1974), marked differences in IQ and classification can occur in children with mental retardation or learning disabilities (Bloom, Raskin, & Reese, 1976). The aims of this study were: First, to observe the incidence of these discrepancies in children with developmental problems; and, second, to analyze different Binet/WISC-R IQ patterns as they relate to clinical interpretation and decision.

METHOD

Subjects

Ss were 121 children (96 males, 25 females) who were referred to the Child Evaluation Center due to possible mental retardation or learning disabilities. They ranged in age from 6 years, 1 month to 15 years, 11 months and represented nearly consecutive referrals of school-age children. Children not included in this study were those with severe degrees of mental retardation or significant sensory and motor problems.

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