Comparative Relationships of the Wechsler Adult Intelligence Scale—Revised (WAIS-R) and the Wechsler Adult Intelligence Scale (WAIS) to the Wechsler Memory Scale (WMS)

Joseph J. Ryan, 1, 2 Samuel J. Rosenberg, 3 and Robert L. Heilbronner 3

Accepted October 21, 1983

This study investigated whether the Wechsler Adult Intelligence Scale—Revised (WAIS-R) and Wechsler Adult Intelligence Scale (WAIS) demonstrate similar patterns of relationship with the Wechsler Memory Scale (WMS). Sixty VA patients were administered the WAIS-R and WMS and 60 completed the WAIS and WMS. The groups were comparable in terms of demographic variables. Pearson correlations were computed between the subtest and IQ scores from the intelligence scales and the scores from the WMS for each group. Comparison of the resulting correlations for the WAIS-R group with those of the WAIS subjects demonstrated only four significant differences, indicating that the WAIS-R and WAIS variables covary in a similar manner with the WMS scores. Following factor analysis of the test data for both groups, coefficients of congruence indicated a high degree of similarity between the two factor solutions. Essentially the same relationships emerged between intelligence variables and the WMS regardless of which scale was administered.

KEY WORDS: Wechsler Scales; intelligence; memory; comparative relationships.

1Veterans Administration Medical Center, North Chicago, Illinois 60099.
2To whom correspondence should be addressed at Central Testing Laboratory (116B1), VA Medical Center, North Chicago, Illinois 60064.
3University of Health Sciences/The Chicago Medical School, North Chicago, Illinois 60064.
INTRODUCTION

The Wechsler Memory Scale (WMS; Wechsler, 1945) is widely used in the clinical examination of persons with suspected and/or verified memory impairment. Traditionally, the WMS results are interpreted in conjunction with those from the Wechsler Adult Intelligence Scale (WAIS; Wechsler, 1955). When a patient is disoriented, shows a marked discrepancy between verbal and visual recall, and/or achieves scores which are significantly below those of the WAIS, this raises the question of a possible memory loss (Prigatano, 1978; Russell, 1975).

Now that the WAIS has been superseded by the Wechsler Adult Intelligence Scale—Revised (WAIS-R; Wechsler, 1981), clinicians will likely incorporate the new test into their assessment practices and assume that the WAIS-R–WMS relationship is essentially unchanged from the WAIS–WMS covariance. This assumption may not be accurate since it is known that the WAIS-R yields consistently lower IQs than the WAIS in normal and psychiatric subjects (Prifitera & Ryan, 1983; Wechsler, 1981). Therefore, the present investigation was undertaken to determine if the WAIS-R and WAIS demonstrate similar patterns of relationship with the WMS in a clinical sample. If similar relationships exist between the two intelligence measures and the WMS, this would constitute support for those who substitute the WAIS-R for the WAIS in their psychological assessment batteries.

METHOD

One hundred twenty neurological and psychiatric patients from a Veterans Administration Medical Center were administered the Wechsler Memory Scale (WMS). In addition, the first 60 patients were administered the WAIS-R, while the second 60 were given the WAIS. All subjects had been referred to the psychology service for routine psychological and/or neuropsychological screening. Table I presents the diagnostic classification of subjects in each group. The groups were equivalent in terms of sex ratio (WAIS-R group—56 males, 4 females; WAIS group—58 males, 2 females), frequency of left handedness (6 left handers in each group), and racial composition (13 blacks and 47 whites in each group). Means for age and education for the WAIS-R and WAIS subjects, respectively, were 44.48 (SD = 13.46) and 44.98 (SD = 12.72) and 12.63 (SD = 2.17) and 12.33 (SD = 2.27). There were no statistically significant differences between the groups on any of the demographic variables.