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A Comparison of the WISC-IV and WAIS-III with 16-year-olds in Special Education

Dr Shirley Gordon and Dr Simon Whitaker

INTRODUCTION

A diagnosis of intellectual disability (ID), mental retardation (MR) or learning disabilities (LD) can have a major effect on an individual's life. On the positive side it can provide services, finance and help in schools. However, it may also be regarded as a stigmatising label that an individual may seek to avoid.

Currently a necessary, though not sufficient, part of the diagnosis of ID is having an IQ below a specified figure, usually 70, or two standard deviations (SDs) below the norm (American Association on Mental Retardation, 2002; American Psychiatric Association, 2000; Department of Health, 2001; British Psychological Society, 2001). This use of a specific IQ figure implies that an individual has a "true IQ" that can be measured.

If different IQ tests systematically measure either higher or lower than other tests, it would raise the question as to which IQ test was providing the best estimate of an individual's true IQ. In the absence of a test that is clearly an accurate measure of true IQ, the best that could be done would be to decide which IQ test is likely to be the most accurate, and use that as the "gold standard" assessment, against which other assessments should be compared. The Wechsler intelligence scales (WISC-IV and WAIS-III) should have a good claim to be regarded as the gold standard assessments. However, for these assessments to be accepted as gold standard assessments for the diagnosis of ID, they should produce equivalent IQ scores in the low ability range. Both Flynn (1985) and Spitz (1986; 1989) reported that the WISC-R gives IQ scores up to 15 points lower than the WAIS-R for IQs of 70 and below. We compared the WISC-IV and WAIS-III in a group of 16-year-olds in special education. Sixteen is the age at which both assessments can be used.

METHOD

Both the WISC-IV and the WAIS-III were given to seventeen 16-year-olds (9 female and 8 male) attending local special schools. The order of administration of the tests was counterbalanced.

RESULTS

| Participant | WISC-IV FS IQ | WAIS-III FS IQ | Difference |
|-------------|------------------|-------------------|--------------|
| 1 | 41 | 61 | 20 |
| 2 | 58 | 72 | 14 |
| 3 | 57 | 69 | 12 |
| 4 | 40 | 49 | 9 |
| 5 | 54 | 67 | 13 |
| 6 | 60 | 70 | 10 |
| 7 | 55 | 70 | 15 |
| 8 | 40 | 55 | 15 |
| 9 | 72 | 78 | 6 |
| 10 | 60 | 70 | 10 |
| 11 | 58 | 69 | 11 |
| 12 | 52 | 67 | 15 |
| 13 | 40 | 54 | 14 |
| 14 | 40 | 49 | 9 |
| 15 | 48 | 62 | 14 |
| 16 | 58 | 67 | 9 |
| 17 | 68 | 73 | 5 |
| Mean | 53.00 | 64.82 | 11.82 |

Statistical differences between mean $P < .001$ on t-test

Correlation between the WISC-IV and WAIS-III $r = .93$

DISCUSSION

A significant difference was found between the WISC-IV and WAIS-III mean Full Scale IQ scores in a sample of 16-year-old children receiving special education. The mean WAIS-III Full Scale IQ score was higher than the mean WISC-IV Full Scale IQ score, with a difference of almost 12 points.

As the degree to which either assessment is in error is not known, it is possible that either the WISC-IV is systematically underestimating true IQ by up to 12 points, or the WAIS-III is systematically overestimating true IQ by 12 points, or both assessments are making systematic errors of less than 12 points.

Assuming that these results can be generalised to all age groups, if a child was assessed using the WISC-IV and obtained an IQ score of 65, they would be given a diagnosis of ID and appropriate services. However, if they were assessed at the age of 17, using the WAIS-III, they would possibly have obtained an IQ score of 77 and therefore not be given a diagnosis of ID or any relevant services.

Although this research was conducted with a small sample, it does provide an indication that the WAIS-III measures higher IQ scores than the WISC-IV, in people who have an ID. Therefore, we would recommend that Psychologists working with people who have an ID exercise caution when interpreting IQ scores.