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**Legal definitions of intellectual  
disability:  
do they work?**

Simon Whitaker

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# Three core criteria

- Significant impairment of intellectual functioning;
- Significant impairment of adaptive/social functioning;
- Age of onset before adulthood.

What do we mean by significant impairment in intellectual functioning?

## **American Association of Intellectual and Developmental Disabilities (2010)**

*“Intellectual functioning:* an IQ score that is approximately two standard deviations below the mean, considering the standard error of measurement for the specific assessment instrument used and the instrument’s strengths and limitation.” (Page 27).

## **American Association of Psychiatry (2013;DMS-5)**

“Individuals with intellectual disability have scores of approximately two standard deviations or more below the population mean, including a margin of measurement error (generally +5 points). On tests with standard deviations of 15 and a mean of 100, this involves scores of 65-75 ( $70 \pm 5$ ). Clinical training and judgment are required to interpret test results and assess intellectual performance.” (Page 37).

## **The World Health Authority (2010; ICD-10)**

Specifies different ranges of IQ figures for the different severities of ID: mild, moderate, severe and profound. For example, for mild it states:

“Approximate IQ range of 50 to 69 (in adults, mental age from 9 to under 12 years)”. (Chapter 5: 2010 on line version).

The tests are considered to be accurate to within 5 points of the measured IQ 95% of the time.

**BUT THEY ARE NOT!**



# A meta-analysis

Whitaker (2008) A meta-analysis of the literature on the test re-test reliability of intelligence tests when applied to people with low intellectual ability ( $IQ < 80$ ).

The mean correlation between first and second test was 0.82.

This corresponds to a 95% confidence interval of 12.47 points.

It was also found that 14% of IQs change by 10 points or more.

Which is close to what a 95% confidence interval of 12.5 would predict.

# Lack of agreement between tests

We (Gordon et al 2010) compared the WISC-IV and the WAIS-III in an empirical study on seventeen 16-year-olds in special education.

# Results

	WISC-IV	WAIS-III	dif	r
FS IQ	53.00	64.82	11.82	.93

# Other errors

- Flynn effect
- Floor effect
- Practice effect
- Malingering

# Psychologist for defense

- WISC rather than WAIS
- Suboptimal conditions.
- Empties negative consequences of getting high IQ.
- Don't repeat a test to avoid practice effects.
- Correct for Flynn and Floor effects.

# Psychologist for prosecution

- WAIS rather than WISC
- Insist on optimal conditions
- Emprise to the defendant that he/she needs to show how smart they are.
- Repeat tests to get a practice effect.
- Don't correct for Flynn or floor effects.

It is difficult to exactly quantify how much difference this could make but:

- WISC vs. WAIS 10 points
  - Conditions 10 points
  - Malingering 4 points
  - Practice 2 points
  - Flynn and Floor 4 points
- Total 30 points



# Conclusion

As long as definitions specify an IQ figure with an explicitly or implied confidence interval of 5 points errors will be made in diagnosis and courts will be unaware of individual's true intellectual ability.