

Is Our IQ Fixed Across Lifetime? The Limited Use of Intelligence Tests in Clinical Settings

Eros Di Giacomo*

Norfolk and Suffolk NHS Foundation Trust, United Kingdom

***Corresponding Author:** Eros Di Giacomo, Norfolk and Suffolk NHS Foundation Trust, United Kingdom.

Received: July 20, 2018; **Published:** August 30, 2018

Have you ever wondered how intelligent you are? Well, I have. Internet is full of sundry tests and brain teasers where anyone can challenge themselves and find out their so called Intelligence Quotient (IQ). I tried several of them out of curiosity and, to tell the truth, my scores were not as amazing as I would have hoped. I decided, however, to start exercising and, little by little, the more I practiced the better I performed. It took a while but eventually I outperformed my first attempts in exercises related to cognitive skills such as memory, spatial recall, attention and so on. Thus, have I become more intelligent than I had been? Probably, most people would disagree. It could be argued that practise and training made me more skilled and used to specific tasks, which consequently reflected in my scores. Honestly, I did not feel any more intelligent. Nonetheless, I could not help but starting to question intelligence tests and their meaning in general.

The Wechsler Adult Intelligence Scale (WAIS) is probably the most popular instrument to assess an individual's intelligence quotient and cognitive capability in clinical settings. In its latest version (WAIS-IV), it consists of ten core subtests and five supplemental tests. The 10 core tests provide altogether the Full Scale Intelligence Quotient (FSIQ). Additionally, they offer four index scores representing the four major components of intelligence that is verbal comprehension (VCI), perceptual reasoning (PRI), working memory (WMI) and processing speed (PSI). As mentioned above, the WAIS has been largely employed in clinical settings as diagnostical assessment and it is currently used in UK and other countries to establish a diagnosis of learning disability. Learning disability (also known as intellectual disability and mental retardation) describes an individual's condition of intellectual impairment and adaptive behavioural difficulties. In terms of intelligence, the threshold for a diagnosis of learning disability is generally an IQ lower than 70 (being 85 to 115 the average range where the normal population falls). After having tried several intelligence tests, I wondered whether tools such as the WAIS are the best way and/or methodology to assess a person's intelligence and subsequently formulate a diagnosis based on that score. One of the tests in the WAIS-IV is digit-span. The evaluator reads a sequence of number which the individual is supposed to repeat. The task is divided into three subtasks: firstly, the sequence must be repeated in the same order; in the second part, the order is backwards; in the final task, the numbers are to be repeated from the smaller to the bigger. The maximum score available is 48. Let us imagine a scenario where a person does the test and scores 24. For the following six months, the person practices with the same type of exercise (obviously with different numbers). When evaluated again with an equivalent although not identical test (that is different sequences of numbers), the individual would be highly likely to perform better than he /she did the first time. The same process could also be applied to the other tests of the WAIS such as matrix reasoning, symbol search and arithmetic to name but a few. Consistent with this hypothesis, that is to say people could actually improve in intellectual tasks, it should follow that intelligence as well is something dynamic that could change, similar to other skills or abilities like a person's strength or coordination. In this case, though, why would we be establishing a life-long diagnosis of intellectual impairment over a single and static snapshot of someone's intelligence? It would seem more reasonable to assess intelligence and its variations over an individual's lifetime. There is, however, a second possibility; namely, intelligence is static and stable. As a result, enhanced scores gained after practicing should not to be regarded as evidence of increased intellectual ability, rather of expertise in a specific skill. If intelligence is fixed, though, can it be really tested and measured by tools whose scores are dynamic and malleable? More

specifically, if cognitive tests assess intellectual aspects which are susceptible to improvement or deterioration, how can they be at the same time an index of something unchangeable and permanent as intelligence? Either way, whether intelligence is fixed or malleable, I would argue that what has been tested through cognitive exercises such as digit span do represent skills that can increase or decline over time. In support of this statement, a recent study by Watkins and Smith [1] shows intelligence variability over time. Specifically, they have tested the long-term stability of the Wechsler Intelligence Scale for Children-Fourth Edition (WISC-IV), an intelligence test equivalent to the WAIS (same type of tasks) but adapted to assess children (age 6 to 16 years and 11 months). The test was administered twice (average test-retest of 2.84 years) to 344 students. They found that 25% of the sample achieved the second time FSIQ scores which differed by 10 or more points from the first evaluation, while 6% of the students showed FSIQ scores with differences over 15 points. Moreover, even higher percentages were found in relation to specific index scores with 29%, 39%, 37% and 44% of the students achieving scores with variations of 10 or more points respectively in VCI, PRI, WMI and PSI. The authors, in agreement with those results, added that “clinicians should not assume that WISC-IV scores will be consistent across long test-retest intervals for individual students and should question recertification of eligibility for special education on the basis of historical WISC-IV scores (pp. 481)”. Accordingly, why having these skills only tested only once?

Cognitive assessments such as the WISC-IV and the WAIS-IV are invaluable instruments which supply important information on the weaknesses and strengths of people and allow professionals to formulate the best strategy and intervention required. Hence, it is because of their importance and purpose that their employment should not be limited to a single occasion. I believe that introducing and developing other versions of Wechsler Intelligence tests, comparable and equivalent but with different items, to be administered as a follow up assessment, would serve multiple purposes. Firstly, it would enhance the monitoring process by providing helpful feedbacks on the effects and benefits of the support, adaptations and strategies employed; secondly, as a consequence of the follow-ups, interventions could be adequately tailored and modified as to adjust to the potential individual’s improvements or deterioration; finally, it could yield useful data to foster and promote further research regarding intelligence and cognitive tests.

Bibliography

1. Watkins MW and Smith LG. “Long-term stability of the Wechsler Intelligence Scale for Children-Fourth Edition”. *Psychological Assessment* 25.2 (2013): 477.

Volume 7 Issue 9 September 2018

©All rights reserved by Eros Di Giacomo.