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Psychological Assessment:
What makes for accurate or inaccurate results?

Psychological assessment is meant to acquire a large amount of information about some psychological part of a person's life in a quick and accurate manner. But, it is not fool proof, and problems can arise for a variety of reasons. What can throw off the results?

Let's start with the obvious and easy items. One factor to always keep in mind is that no form of measurement is ever 100% accurate. For instance, whenever there is a political poll, such as what the public thinks about the president's performance in office, or which candidate is favored to win an election, there is a figure that is added to the results, such as " $\pm 3\%$ ". What does that mean? If the poll says that 50% of people are going to vote for a particular candidate, the likely range is actually 47-53%.

The more common experience of this is anyone who is trying to lose weight. After much dieting and exercise the individual climbs on their bathroom scale – and their weight has not budged at all. So, many people will hop off the scale, and get back on it a second later, and poof! a pound has been lost. All that has happened is the scale is subject to random factors (how you stand on it, its rusty springs, etc.) and the weight displayed is accurate only to a certain degree like plus or minus a pound. To prove this, hop back on the scale again after another second, and you may discover that you have now gained a pound. The same is true for psychological test scores, such as IQ's. People may say "I have an IQ of 120" but the more accurate way of saying it is "I have an IQ of $120 \pm X$ points."

This kind of phrasing normally does not need to be done for most people. But, there are times it can make a difference. For instance, sticking with IQ tests since they are well known and widely employed – one criteria for diagnosing mental retardation (MR), which may qualify a person for disability benefits, or special ed services in school – or disqualify them from some job - is an IQ below 70. If a person obtains an IQ of 69, are they MR? Maybe. If there is a ± 7 point spread of likely scores, due to random factors such as the individual making lucky/unlucky guesses on the test, then the real range is an IQ of 62-76. The 'real' score might be 69, or anywhere within that range. One never knows. But, given the range does occur above the cut-off of 'less than 70' some caution is warranted and making an emphatic statement "This person is MR" is best avoided.

A second factor that can reduce the accuracy of psychological test scores are various human limitations or liabilities. For instance, mothers often tell their children before a big test the next day, such as SAT's, 'Get a good night's sleep.' Lack of sleep can and typically will reduce scores for something like IQ or academic achievement measures.

Other human factors beyond sleep that can interfere include elevated anxiety. As much as ‘stage fright’ can impair an actor’s performance on stage, so too much anxiety can interfere with doing well on psychological tests. Depression is another issue which can take a serious toll on a person’s ability to perform well.

Being under the influence of alcohol or drugs – which may range from over-the-counter pills such as for allergies or cold symptoms, to prescription medications such as narcotics for pain – to illegal substances such as cocaine or marijuana, can all impair test performance. One of the most common phrases I hear from patients about drug side effects is that some medicine “turned me in to a zombie.”

Still other factors can include distractions such as it being too noisy in the testing environment. There is a reason why people go to libraries to study, and the rule of silence is enforced so strenuously inside them. If the testing room is too hot, cold or humid a toll can be taken on test performance as well.

Attention deficit disorder (ADHD) is another major factor that interferes with accurate measurement of *what a person is truly capable of achieving* on something like an IQ or academic achievement test. Kids I see in my practice typically have grades jump by 2 or more points, such as going from being a C/D student to an A/B one, once they are effectively treated with medication for the disorder. A fair number of kids I evaluate go from making straight F’s to straight A’s, once the medication is working for them. That is, being so unfocused and easily distracted is exacting an extreme price on the student’s ability. The ADHD medication is not making the person any smarter. But, it is allowing them to function at their true potential, which I call ‘not driving with the brake on.’

Motivation is another big factor that can throw off results. e.g. I have seen many adults who were applying for some kind of benefits, such as SSI disability, who tried to ‘fake bad’ and look worse than they really were. The logic is, ‘If I look less intelligent, or more depressed, or more crazy than I really am, I’ll get some money from the system.’ Scores such as for memory or IQ plummet when this kind of scam is being attempted.

The opposite problem also occurs, where people may ‘fake good.’ This happens a lot too, such as whenever someone is applying for a job they really want. Probably everyone has been in a job interview, and had their potential employer ask an opening question of ‘Tell me about yourself.’ Who in their right mind is going to say, *‘I know nothing about this job, have no skills or experience for it, am flat broke, and I’m incredibly desperate for any job right now. Please, please, please hire me!’* All of that may be true, but the more appropriate response to that question is use of ‘spin’ such as “I learn quickly” which is a phrase meaning ‘I have no experience.’ Or, “I’m willing to work long hours” which means “I’ll gladly accept overtime where I get paid time and a half, because I need the money.’ The same problem surfaces with psychological tests, such as personality measures, where people spin a very favorable impression of themselves. They should ‘put their best foot forward’ in such situations, but there are limits as to how far one should go. Cross the line, and the accuracy of test scores suffers.

Other factors that can interfere with accurate assessment include violating the test's parameters. That is, virtually every commonly used psychological test used in the U.S. is premised on:

- ❖ the test taker being born and raised in the U.S.
- ❖ their being educated in the U.S.
- ❖ their having English as their primary if not only language
- ❖ their not having any major disabilities such as being (legally) blind, deaf or hard of hearing, speech impaired such as from a stroke, or physically challenged such as having impaired motor skills from something like severe arthritis, or paralysis of the hand they write with.

Violate one or more of these rules and accuracy of scores go out the window very quickly. Individuals who immigrate to the U.S. can be tricky to assess. Those who come from an English speaking country such as England, Australia or Ireland are going to suffer a smaller penalty against them than someone say from China or Poland where English is not the primary language and the individual may have learned it only upon entering this country. Immigrants from other countries, such as India – where English is taught early on in school, and spoken widely, fall in to a gray category between the two extremes noted above. Such individuals may have a *relatively* good command of English – but not at the same level as someone born and raised in the U.S.

Bilingual individuals may also not be evaluated as accurately as those who are monolingual in English. Even when the bilingual person is born and raised in the U.S., and English is their primary language, there may still be an impact on the scores.

If translators are needed, be it for someone who does not know English at all, or is not fluent in it, or even when American Sign Language is employed by a deaf individual, all bets are off for accuracy of test scores. Although the interpretation may be nominally accurate, it is still introducing unknown factors in to the assessment.

Still more possible sources of interference include someone beyond the psychologist and test taker being present in the room. That is, having an 'audience' can throw off results. The audience may be a parent of a young child. Or a spouse. Or an adult child being present for an elderly parent. Or, a lawyer being present when some kind of forensic evaluation is being done, such as for criminal purposes, or in applying for disability benefits.

The easiest way to understand why the presence of others makes a difference in test performance is to think of what happens when someone is on stage. For material that is well known and the performer is good at handling, they may do a better than average job when there is an audience viewing them. But, for unfamiliar material, or something they are not comfortable with, 'stage fright' takes over and their performance can plummet. The same effect should be expected to occur with psychological tests. That is, areas which are well handled by the person will get a boost. And those where they are weaker will see a lower score earned contrasted to what would have resulted had there been no audience.

Does this mean that there should *never* be an extra person in the room? No. The psychologist needs to stop and think, and weigh the issues. For instance, I have seen young kids, most commonly from about the ages of 4-6 years old, who were very scared and crying inconsolably when their mother left the office. The odds of my getting any kind of accurate test results with a child in such a state of emotional upheaval is probably nil. Inviting the parent back in to the office, and telling her to be like ‘a fly on the wall’ and unobtrusive reassures the child, and most likely is not causing any undue influence on the resulting scores.

Another possible factor that can throw off test results is when the wrong test is employed. ‘The right tool for the job’ is a maxim that applies throughout life. One of the more extreme examples of this has been when I have been asked by a government to evaluate a criminal who is incarcerated for ‘risk of recidivism.’ That is, ‘if released from prison, will this person commit another offense?’ That is a reasonable question – but if the test that I am told to use is the IQ measure – it can’t be answered at least with any accuracy. IQ has no bearing on risk of recidivism. Smart people can re-offend as can those not very bright.

Less extreme versions of this include trying to predict other psychological problems, such as ‘risk of committing suicide’ or ‘risk of being violent against others’ – by employing some test that has no ability to make such predictions. There are tests that exist to make such predictions, but many commonly used measures do not have such abilities yet they may still be employed.

Custody battles, such as where a judge asks ‘which parent is more fit to have sole custody of a young child?’ may be another common example where a great deal of care has to be employed in terms of the types of assessment instruments that are employed to make an accurate determination. e.g. I have seen adults who are mentally retarded be excellent parents, while witnessing very bright ones with extremely high IQ murder their own children. By the way, I am not trying to say that IQ tests are always bad. Only that IQ tests are a specific tool, and they have to be employed for the right purpose.

Milder versions of using ‘the wrong test’ can involve employing a measure outside of its normative range. What this means is that all tests are designed to work with only certain groups, such as ‘kids from the ages of 6 to 16 years old.’ If a child is 5 years, 11 months and 29 days old and a psychologist uses a test that is designed for ‘ages 6 on up’ will inaccurate test scores result? *Technically speaking*, yes. *Realistically*, being one day under the normative range is unlikely to make any difference. Would testing someone a week or a month, or three months under or over the normative age range cause problems? There is no easy answer to the question. The psychologist has to stop and think, and be able to justify using a test outside of its normative base. There are reasons to do so, but care needs to be employed.

In summary, in general if you or someone you know, such as a family member, has undergone some testing by a psychologist who is trained and experienced in assessment, the odds are that the results are appropriately accurate. (Remember that $\pm 3\%$?) That is, most professionals be they psychologists or people in other disciplines, are very good at what they do, and know how to do their job right. But, as the above discussion has briefly outlined, there are ways that test results can lose accuracy, and one should always be aware of that possibility. If you are in doubt, discuss it with the psychologist who has performed the evaluation.