

childPSYCH News

A newsletter for professionals and parents

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www.childpsych.net.au

Special points of interest:

At *childpsych* only psychologists who are registered teachers Educational Psychologists will write the report on learning difficulties

All *childpsych* psychologists have a minimum of masters level training in psychology

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What is Intelligence?

Feature article by Philip Gosschalk MAPS, Director & Psychologist of *childpsych*

Defining "intelligence" continues to be of strong debate. Some researchers argue that what intelligence is differs according to culture whereas others argue that intelligence is the same set of skills across cultures.

Intelligence is generally considered the ability to learn and adapt to one's environment. So in western culture we usually consider people who are highly intelligent to be the one's that are articulate, fast learners and can perform mathematical tasks well. As a result we have intelligence tests that measure such things as reasoning or problem solving skills, short term memory ability, language skills and so on. We consider intelligent behaviour to be reflected in such things as high academic grades, holding employment positions in science/research and so on.

How is intelligence defined in other cultures?

In other cultures, such as the town of Kisumu in Kenya—Africa, intelligent behaviour has a different way of being determined. In this traditional town, like western cultures, an intelligent individual is also one who can learn quickly and adapt to their environment. But instead of demonstrating their intelligence on tests which measure short term memory and so on, intelligent behaviour is considered an individual's ability to give themselves the right dose of a herbal medicine to combat common parasites. This is called



Intelligence tests do not always predict how well someone can adapt to their environment

intelligence because each culture may value different cognitive skills and therefore develop these skills through their education and family environments.

This means then that while intelligence tests can be helpful in predicting how well someone can adapt (or live effectively) to their cultural environment, they are less useful with different cultures.

What does an intelligence test look like?

Intelligence tests are sometimes called "cognitive tests". They measure such things as short term memory, processing speed, hand eye coordination, problem solving and so on. These skills are measured by having the individual complete certain tasks such as looking at various pictures of objects and naming the objects (this tests such things as vocabulary). The commonly used tests are the Wechsler Intelligence scales, Stanford Binet and the Woodcock Johnson. Each of these tests has the same basic belief that a range of cognitive skills make up intelligence and that when added together can give an overall estimate of someone's level of intelligence ("IQ Score").

However, the Woodcock Johnson, a test used at *childpsych*, differs slightly in that it measures a wider range of cognitive skills. There is some disagreement among researchers whether a single IQ score can ade-

"practical" intelligence.

Note that the process of reasoning and adapting to one's environment is the same across cultures, but how it is measured or determined is different.

What happens if we use western IQ tests with non-westerners?

In short they usually tend to perform poorly leading some people to conclude that other races are not as "intelligent"! A recent study looked at this and examined how well rural children in an Eskimo community completed a typical intelligence test and how well semi urban children in Alaska completed a test of practical intelligence for the rural environment. The results showed that the rural children did poorly on the traditional IQ test and the semi urban children did even worse on the test of practical intelligence in the rural environment. So we must be careful at arriving at conclusions about other cultures intelligence based on western IQ tests. Some researchers believe that cultures perform differently on each others measure of intelli-

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us under Medicare
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information

"schools that teach
problem solving
approaches such as a
philosophy curriculum or
DeBono's Hats are helping
children better adapt to
their environment"



childpsych

PSYCHOLOGY PRACTICE

They're the most
important thing
in your life
and sometimes they need our help

What is intelligence? con't

quately describe someone's general level of intelligence and ability to adapt to their environment. Instead these researchers argue that we need to look at areas of cognitive strengths and weaknesses. This makes sense as we often choose occupations and interests based on our cognitive strengths. So a child who is good with language processing may pursue a career in journalism or sales. Whereas a child who is good at hand-eye coordination may choose cricket over the chess club and select a career as a bank teller or in the trades.

Some caveats

1. Do not assume that an "IQ score" completely predicts a child's potential in life to be an effective employee or family member.
2. If the child is not from a culture similar to Australia then interpretation of the IQ test must be done cautiously.
3. Current IQ tests do not measure practical problem solving or social competence (which has more to do with adapting to our environment!).
4. Australian schools that teach problem solving approaches such as a philosophy curriculum or DeBono's Hats are helping children better adapt to their environment by developing thinking skills.

Can Gifted Children have AD/HD?

Giftedness is defined as exceptional ability to perform some task. It is usually defined on the basis of an "IQ" test where an IQ Score of 120 or more is used (see childPSYCH News Vol 2 No 3 for more discussion).

There is considerable debate and some myths about AD/HD and children with high levels of intelligence. Some professionals argue that the restlessness and impulsivity seen in highly intelligent children reflects "mental energy". According to these people we all discharge psychic or mental energy by tapping our pens, shaking our legs, thinking out loud and so on. Others argue that the impulsivity and over activity seen in highly intelligent individuals reflects a thirst for learning or curiosity about the world.

The problem appears to be that there are many untested theories about the presence of impulsive/hyperactive and distractible symptoms in highly intelligent children. Also complicating things are that such children often continue to pass school tests and even achieve fairly good grades.

Recent research has shown that it is possible to have AD/HD and be highly intelligent. A study conducted at Harvard and the State University of New York found that the rate of AD/HD in highly intelligent

children was no greater or less than the rate of AD/HD in children of average intelligence (5-10%). The researchers concluded that one of the best ways to determine if highly intelligent children have AD/HD is whether there is a family history as genetics is considered the main cause of this disorder.

More concerning is that the authors found that these highly bright AD/HD children often under performed aca-

demically, repeated grades more and had more social problems than High IQ individuals without AD/HD.

At *childpsych* our Gifted & Talented Assessment™ package is

designed to check for the presence of attention problems amongst other things. We use cognitive testing to help determine if true attention and/or problems with impulsiveness exist. If the child is impulsive and distractible, but cognitive testing does not support this (along with other information) then we can conclude that the behaviours being seen are more the "cognitive style" seen in highly intelligent children than the neurological problems expected in AD/HD.

The key point is that highly intelligent children are just as susceptible to a range of childhood problems as any other child.



Temperament and Personality

Temperament refers to the biological aspect of personality. Temperament can be thought of as our biological wiring that we are born with. There are several temperament traits such as our energy levels, ability to tolerate heat and cold, how comfortable we are with new situations, whether we are regular in our sleep cycles and so on.

Personality is generally considered the result of the environment we live in influencing

our temperament. For example, a child who is uncomfortable in new situations is at risk of social anxiety. Therefore, our temperament can place us at risk of certain psychological problems if we live in environments that are not conducive. Temperament researchers talk about "temperament-environment fit". This actually means that parenting styles, for example, may need to differ depending on the child's temperament. For example, chil-

dren who withdraw from new situations may need to be encouraged to socialise more even if it is upsetting for them initially.

Understanding someone's temperament lets us know their risk for certain psychological problems and allows preventative actions to be taken.

