

Intelligence and its disorders

Intelligence is an innate set of abilities and talents that develop during the development of an individual. It is the ability to recognize a situation, understand it and solve it as efficiently as possible in the shortest possible time. It allows people to:

- **Orientate yourself** in all situations.
- Correctly **assess relationships and dependencies**.
- To creatively solve various completely **new tasks** based on processed and stored information.

It is therefore a set of abilities including *operations with numbers, understanding, speed of perception, understanding of space and context*, etc., forming the **innate basis of the intellect**.

We often talk about **the level of mental abilities**. It increases **until the age of 16-17** and **slowly decreases from the age of 24**. Then it begins to be replaced by **life experiences**.

We measure it with **intelligence tests**.

Influences

1. **Genetic** (up to 50%).
2. **Environment** (speech, care, school, etc.).

Examination

- We normally examine the intellect of the subject during the interview. We monitor vocabulary, the structure of sentences, the pace of speech, and also knowledge from school or general awareness.
- For a rough orientation, we will use simple numerical problems or the interpretation of proverbs.
- For the orientation examination, it follows from practice that it is appropriate not to tell patients that we are examining their mental abilities, but to label the procedure as an examination of concentration.
- In the case of lower intelligence, it is necessary to determine whether it is innate or acquired.
- In children, we often perform several examinations over time.

Intelligence Quotient (IQ)

- Used as a measure of intellectual level.

IQ calculation

(mental age / calendar age) × 100

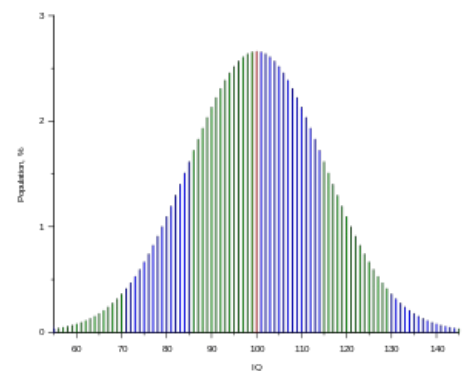
- the number 100 corresponds exactly to **the average IQ**.
- **maximum performance** is required for tests.
- a significantly changed mood compared to normal or fatigue can shift the measured IQ value by up to 10 points to either side.

IQ values

- **to 69** = mental retardation (oligophrenia) - 5% of the population
- **70-89** = below average - feeble-minded - 20% of the population
- **90-109** = average - 50% of the population
- **110-129** = above average - 20% of the population
- **130-139** = high above average - about 3% of the population
- **over 140** = genius

Global intelligence tests

- They consist of solving situations within a time limit. They are designed to include all components of the intellect, i.e. they evaluate the intellect as a whole (US Army tests; Army beta, ...).



IQ curve

Analytical differentiation tests of intellect

- It evaluates individual parts of the intellect.
- Wechsler-Bellevue test:
 - allows distinguishing congenital and acquired intellectual deterioration;
 - it consists of two parts (verbal and non-verbal).

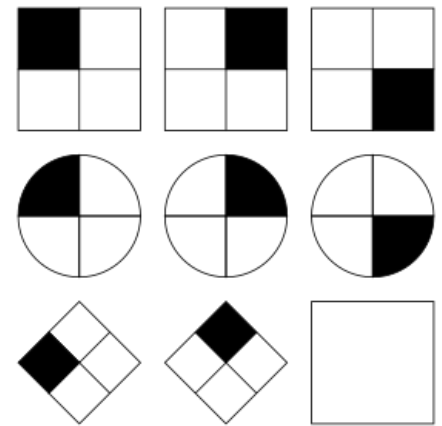
Performance tests of talents and abilities

- Raven's Progressive Matrices:
 - it consists of 60 additional geometric shapes divided into 5 groups allowing to evaluate individual components of intelligence.

Mental retardation

 For more information see *Mental retardation*.

This **congenital or early acquired** (up to 2 years of age) intellectual disorder was previously referred to as oligophrenia - feeble-mindedness. It is characterized by a serious impairment of intellectual abilities, which leads to a significant limitation of the adaptive functioning of the child or adult in their social environment. The basic diagnostic criterion is a low score in a comprehensive intelligence test (i.e. performance lower than 2 standard deviations from the mean). However, only the result of the test is not enough for the diagnosis, the individual in question must also fail to fulfill the demands expected of an individual of his age in his social environment (i.e. family). Impaired cognitive abilities tend to be unevenly distributed among mentally retarded people. Delayed speech development and verbal intelligence are often observed along with behavioral disorders.



Raven Matrix

In general, mental retardation is divided into 4 degrees (according to the MNK-10 classification):

1. IQ 50-69 – **mild mental retardation** (formerly referred to as debilitation)
2. IQ 35-49 – **moderate mental retardation** (formerly known as imbecility)
3. IQ 20-34 – **severe mental retardation** (formerly referred to as idiocy)
4. IQ below 20 – **profound mental retardation**

Mental retardation versus dementia

Mental retardation refers to insufficient **development** of the intellect.

- These are people with innately lower intelligence.
- It also occurs in individuals with impaired intellectual development during the **first two years** of life. (due to infection, toxicity, injury, etc.).

Dementia, on the other hand, is a **reduction** of already acquired intellectual abilities.

- It can occur after the individual reaches two years of age.
- It is usually caused by injury, infection, or degenerative diseases,...
- In order to examine a suspected demented individual, it is, therefore, necessary to know the level of his intellect before the illness. The level of education achieved will often tell.

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Pseudodementia is a descriptive rather than a diagnostic term. It belongs to the group of purposeful reactions. It occurs in difficult life situations, such as police custody, execution of a sentence, war, or natural disasters. Disabled people unknowingly pretend to have a mental disorder, so it is a psychogenic disorder. The affected person answers the questions similarly to dementia patients, but the answers are close to the correct ones. The onset of the disorder tends to be sudden, with the rapid loss of social habits such as hygiene and food habits being noticeable. Memory lapses for certain specific periods are common. It occurs in sensitive people, people with personality disorders, and individuals with reduced intellect.

Genius

The term genius refers to **extraordinary intellectual abilities** that have a great social impact on their wearer. It typically means extraordinary ingenuity and creative ability of an extraordinary scale. Intellectual abilities can be developed even only one-sidedly at the expense of other components of the psyche, which can be reduced (for example, in genius mathematicians who rely on the help of their surroundings in practical life).

Links

External links

- Medscape - Mental Retardation Differential Diagnoses (<https://emedicine.medscape.com/article/1180709-differential>)

References

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Resources

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